L. 71 NO. 12

textile bulletin

FEBRUARY • 15 • 1947

Numerous ways in which industrial trucks powered by storage batteries can be used in the average textile plant are cited in an article beginning on Page 28 of this issue.

EARCH IN SOCIAL SCIENCE
539 JULY 47
PEL HILL N C 2837 G

TROUBLE STARTER

Difficulties in subsequent manufacturing processes may often be traced back to the Opening Room. Inadequate cleaning of the cotton can cause plenty of grief all down the line.

It is important therefore that pickers should operate at maximum efficiency, and this is impossible unless the machines are equipped with DEPENDABLE APRONS.

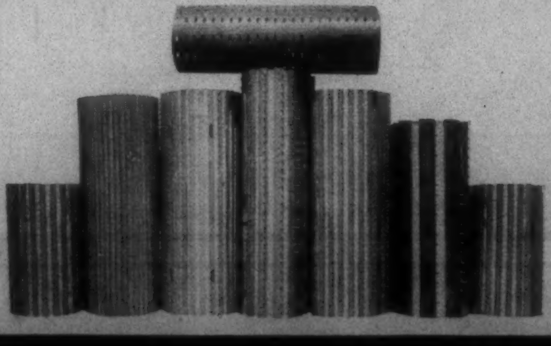
The quality materials and careful workmanship that go into every textile apron made by this company shows that we realize the importance of the particular function which this equipment performs.

OUR APRONS
LAST LONGER AND
DO THE JOB BETTER

QUICK DELIVERY
FOR STANDARD PICKERS
FROM STOCK

TROY WHITEHEAD MACHINERY COMPANY

Phone 3-9831 CHARLOTTE, N. C. P. O. Box 1245



ABP

ABC

ADVERTISING
INDEX—PAGE 57

Let
3
STAR
LEATHER
BELTING
do its very special
job in YOUR plant—NOW

Why deprive your plant of the exclusive features 3-star belting embodies, features that are not just something to talk about, but are inherent characteristics of service purposely built in. A 3-star belt gives you unusually high tensile strength, positive pulley grip, and minimum stretch—all results of Charlotte complete control over every process in the manufacture from the raw hide to the finished belt.

3-star leather belting is specifically made to meet the peculiar requirements of the textile industry.

CHARLOTTE
LEATHER BELTING CO.
CHARLOTTE, NORTH CAROLINA

Published Semi-Monthly by Clark Publishing Company, 218 W. Morehead St., Charlotte, N. C. Subscription $1.50 per year in advance. Entered as second-class mail matter March 2, 1911, at Postoffice, Charlotte, N. C., under Act of Congress, March 2, 1897.

"You're Right! Your Business Is Different!"

Each business has its own peculiar problems.

That is why Commercial factoring is so flexible—a modern method of financing—suited to your particular needs. Immediate working capital is made available through your accounts receivable. Cash is forwarded to you as shipments are made. Yet you sell on your regular terms. Credit losses and collection expense are assumed by us.

Let us tell you how Commercial factoring increases turnover and profits.

COMMERCIAL FACTORS CORPORATION

Fred'k Vietor & Achelis, Inc.	Schefer, Schramm & Vogel	Peierls, Buhler & Co., Inc.
Established 1828	Established 1838	Established 1893

TWO PARK AVENUE, NEW YORK

EUGENE G. LYNCH, 80 FEDERAL STREET, BOSTON, MASS.
T. HOLT HAYWOOD, WINSTON-SALEM, NORTH CAROLINA

HOW TO ADD LIFE TO YOUR CARD CLOTHING

Condition It Before Using!

To increase the life of your card clothing, open it and expose it to the atmospheric and temperature conditions of your card room for 48 hours before using.

If the card clothing is stored until actually needed it is generally cold when put on the cylinder. Cold clothing, applied to a warm cylinder or doffer, can cause a condensation of moisture which rusts the wire, even though the rust may be invisible.

The simple precaution of conditioning for 48 hours before using will prevent sweating, retard rust and greatly extend the efficient life of your clothing.

While good clothing will give yeoman service with reasonable care, it is poor economy to use any clothing after it shows signs of wear. Periodic inspections by one of our practical card men will tell you when it's time to change. This service is free and includes inspection of chains, bearings and settings as well as clothing. Repair programs are arranged so as to involve minimum expense and minimum loss of production time.

Ask our representative to call without obligating you in any way. His recommendations frequently increase production in addition to improving quality of work.

ASHWORTH BROS., INC.
American Card Clothing Co. (Woolen Div.)

Fall River*†‡ Worcester*‡ Philadelphia*†‡
Atlanta†‡ Greenville†‡ Charlotte†‡
Dallas†‡ (Textile Supply Co.)

**Factory* *†Repair Shop* *‡Distributing Point*

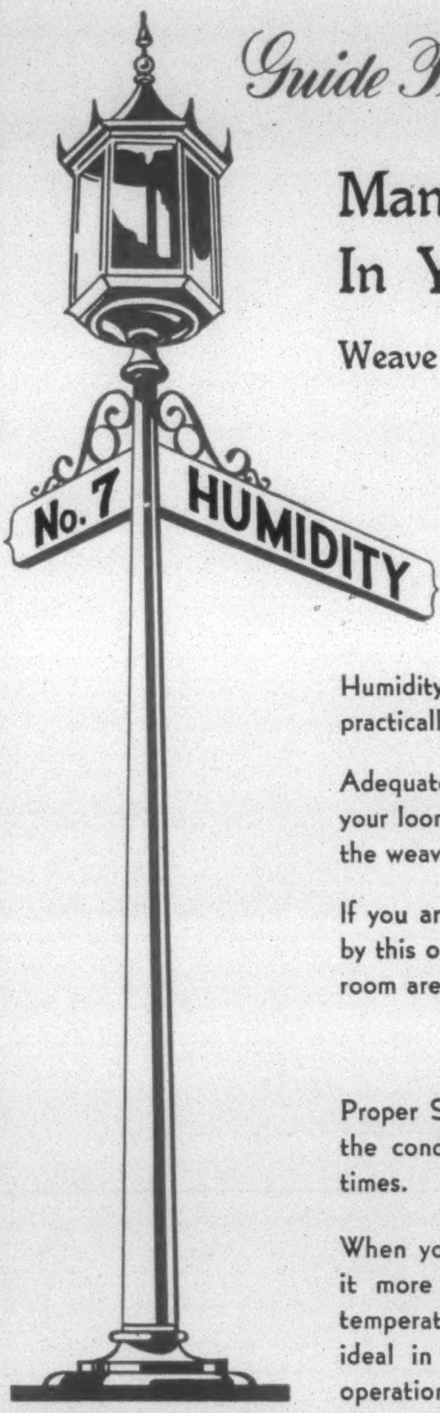
PRODUCTS and SERVICES

— Card Clothing for Cotton, Wool, Worsted, Silk, Rayon and Asbestos Cards, and for all types of Napping Machinery • Brusher Clothing and Card Clothing for special purposes • Lickerin Wire and Garnet Wire • Sole Distributors for Platt's Metallic Wire • Lickerin and Top Flats Reclothed.

Ashworth PIONEERS IN CARD CLOTHING

3 FACTORIES • • • 6 REPAIR SHOPS • • • 7 DISTRIBUTING POINTS

Guide Posts to Increased Production



Man-Made Weather In Your Mill

Weave Room air properly humidified will
Reduce Loom Stops
Diminish Dust and Fly
Eliminate Static Electricity

In a dry weave room both warp and filling become brittle . . . loom stops are excessive . . . production falls off.

Humidity reduces this trouble. The correct amount of humidity practically eliminates loom stops from this source.

Adequate control of humidity and temperature enables you to run your looms at consistently higher speeds. It lightens the work of the weaver; steps up weave room efficiency; reduces dust and lint.

If you are having excessive loom stops you may find it is caused by this one factor. Be sure that weather conditions in your weave room are right—

Consult Your Engineers

Proper Supervisory Controls should be set up to make sure that the conditions and the standards you want are maintained at all times.

When you install new X Series High Speed Looms you will find it more necessary than ever before to have correct operating temperatures and humidity. Conditions which you have found ideal in the past may prove to be entirely inadequate for the operation of these faster running looms.

Correct atmospheric conditions are and always have been essential to good weaving.

Seventh in a Series

Of What Well-Managed Mills Are Doing to Get the Best Results in Weaving

DRAPER CORPORATION
HOPEDALE MASSACHUSETTS

It's Always Fair Weather at Wamsutta
with AMCO EVAPORATIVE COOLING

WAMSUTTA'S fame for quality is not accidental. It results from deliberate measures to assure a superior product. Important among these advantages is an AMCO Humidification and Cooling System.

By reducing excessive temperatures and holding humidity at correct levels—an easy routine with AMCO—ideal processing "weather" prevails in every department. Also important to efficient production is greater comfort for the worker.

Relative humidity is accurately maintained by introducing atomized water spray, and the frictional heat of high speed machines is absorbed by evaporation of this moisture in conjunction with carefully controlled air-flow. No expensive changes are necessary—no air ducts to install—no jump in maintenance costs.

What an AMCO System has done for many leading mills it can do for you. An AMCO engineer will gladly show you how you can modernize your plant simply and economically for better product quality with increased output.

FEATURES OF AMCO HUMIDIFICATION AND COOLING

- Reduces excessive temperature and holds relative humidity at point best suited to fibre and process.
- Speeds production in high friction (heat) areas.
- Assures evener yarn counts and increases breaking strength.
- Gradually increases regain for good roving and consequent better spinning.
- Drafting of fibres smoother and more compact.
- Waste and fly greatly reduced.
- No cumbersome ducts to require cleaning and obstruct light.
- Easier to install—minimum disruption.
- High flexibility to meet changing room conditions.
- Minimum maintenance.
- Amco Evaporative Cooling utilizes your present humidification system.
- Increases worker comfort.

AMCO

HUMIDIFICATION and COOLING

AMERICAN MOISTENING CO. AFFILIATED WITH GRINNELL COMPANY, INC., PROVIDENCE, R. I. • BOSTON • ATLANTA • CHARLOTTE

HENDERSON CARD COILER GEARS

Henderson Card Coiler Gears are reinforced throughout to reduce wear and breakage . . . to provide longer, more efficient service and smoother performance with lower maintenance costs. Henderson machine-molded cast-tooth and precision-machined cut-tooth gears fit accurately, mesh easily . . . reduce chatter and vibration. Your insurance against costly breakdowns due to gear trouble.

The quality of Henderson gears is assured, from raw materials to finished product, by modern metallurgical and foundry practices to provide uniformity of specifications . . . by accurate machining and rigid inspection to assure maximum operating efficiency . . . and by twenty-five years of experience in serving many of the South's leading textile mills.*

Find out how these advantages can improve production and save money in your mill. Write for further information or submit your drawings and specifications for quotations.

*Names furnished upon request

QUANTITY PRODUCTION OF CAST AND CUT-TOOTH GEARS FROM 2 TO 32 DP

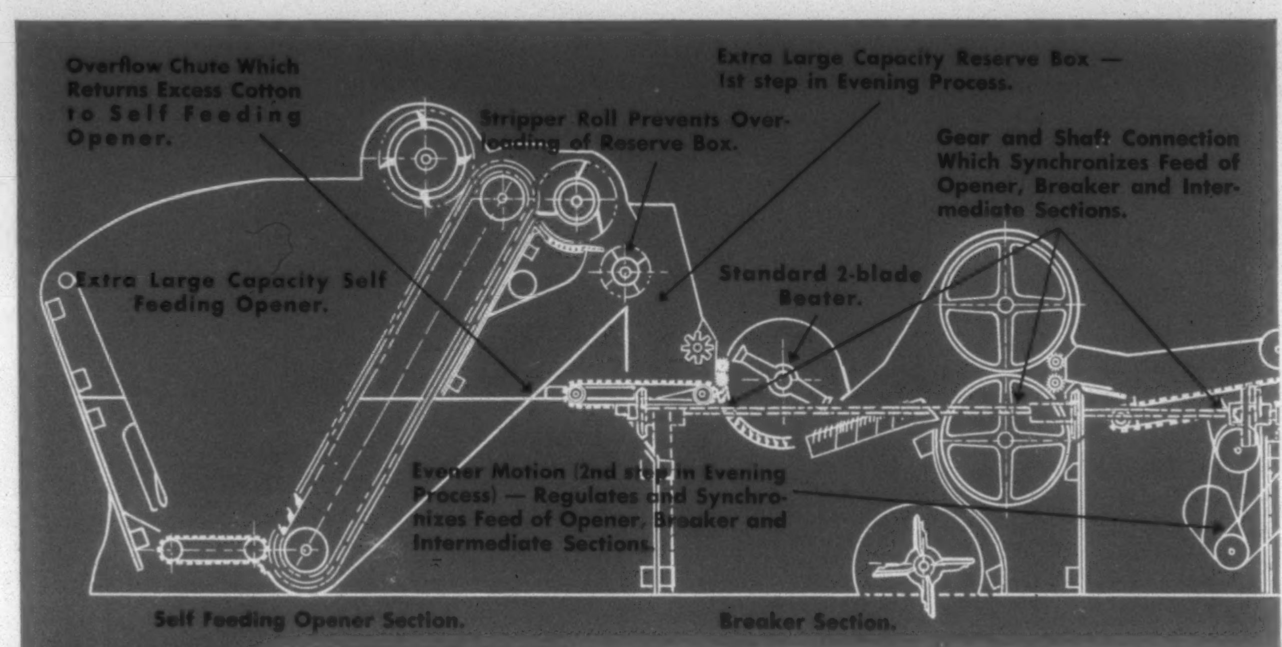
HENDERSON FOUNDRY & MACHINE CO.

(A Division of Southern States Equipment Corporation)

HAMPTON, GEORGIA

Largest Manufacturer of Cast-Tooth and Cut-Tooth Gears in the South

H & B A-1 ONE PROCESS PICKER-


Overflow Chute Which Returns Excess Cotton to Self Feeding Opener.
Extra Large Capacity Reserve Box — 1st step in Evening Process.
Stripper Roll Prevents Overloading of Reserve Box.
Gear and Shaft Connection Which Synchronizes Feed of Opener, Breaker and Intermediate Sections.
Extra Large Capacity Self Feeding Opener.
Standard 2-blade Beater.
Evener Motion (2nd step in Evening Process) — Regulates and Synchronizes Feed of Opener, Breaker and Intermediate Sections.
Self Feeding Opener Section.
Breaker Section.

The H & B A-1 One Process Picker has established an admirable record for picker room performance. Modern Mills which demand exacting lap tolerance consistently report top efficiency, with rejected laps running as few as 5 per 1,000.

This exceptional lap uniformity is due to an evening process which starts at the Reserve Box in the Opener Section and continues through the Breaker and Intermediate to the Finisher Section. At no point, once the lap is started, is the evener process interrupted.

Our patented Reserve Box (in the Opener Section), which acts as No. 1 evener, is shown in the above illustration. The volume of raw stock in this box is kept constant, thus providing a uniform supply of stock to the feed apron delivering to the Breaker Section.

The evener motion in the Intermediate Section is also shown. Here a cone evener regulates and synchronizes the rate of feed of the Opener, Breaker and Intermediate Sections. The lap produced at the Intermediate Section is so nearly perfect that the final evener process in the Finisher Section is greatly simplified.

H & B AMERICAN

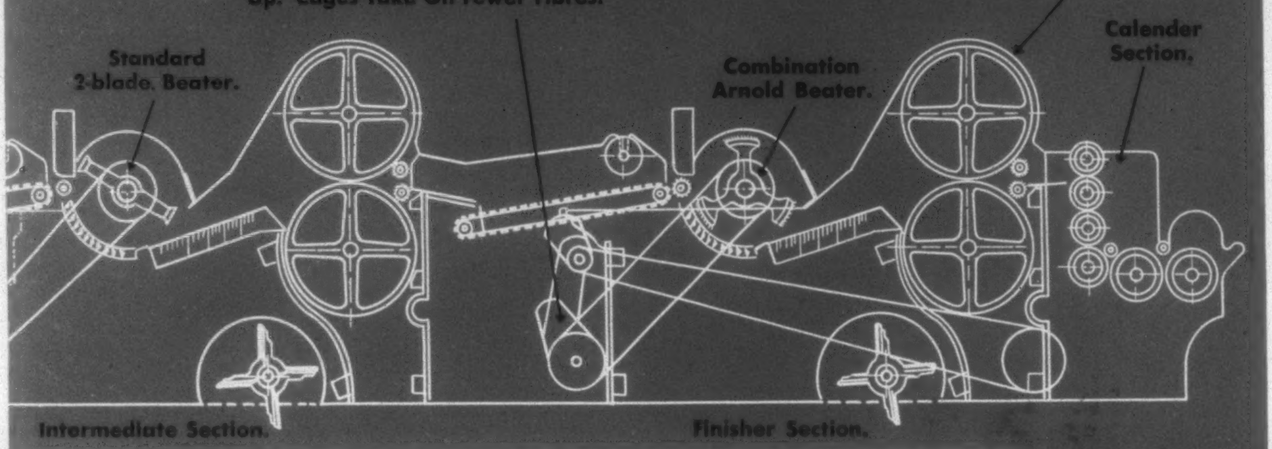
Builders of Modern

FACTORY, EXECUTIVE OFFICES AND EXPORT

99% OF LAPS PRODUCED PERFECT

Evener Motion (3rd step in Evening Process) — Variable Speed Drive in Cage and Calender Sections.

1. **Thin Places Act on Evener, Causing Cages and Calender To Slow Down. Cages Take On More Fibres.**
2. **Thick Places Act on Evener, Causing Cages and Calender To Speed Up. Cages Take On Fewer Fibres.**



The final evener motion in the Finisher Section, where our patented variable speed calender and cage drive is used, is also shown above, with an explanation of how it operates.

3 BEATING OPERATIONS

The H & B A-1 One Process Picker uses 3 beaters to achieve a more thorough opening and cleaning of the fibres. Gentle handling of the fibres is insured by proper beater settings and proper beater speeds so as to deliver the proper number of blows per inch. Even the most delicate rayon fibres can be safely processed in this way.

The Combination Arnold Beater, manufactured exclusively by H & B, ordinarily used in the Finisher Section, combines the positive effectiveness of a blade beater and the gentle carding action of a Kirchner beater.*

*Any combination of beaters adequate for the processing of any raw stock can be supplied.

MACHINE CO.

Textile Machinery

DIVISION — PAWTUCKET, RHODE ISLAND, U.S.A.

BRANCH OFFICES

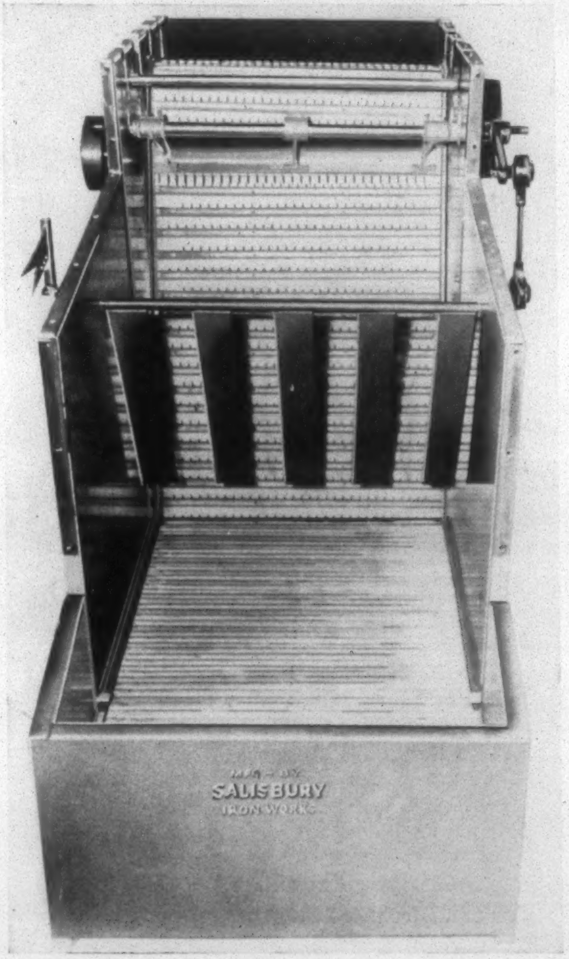
ATLANTA, GA.
815 CITIZENS AND SOUTHERN
NATIONAL BANK BUILDING

CHARLOTTE, N. C.
1201 JOHNSTON BUILDING

Salisbury

Enclosed Blending Feeder T

Models S BF-1 and S BF-2 Salisbury Enclosed Cotton Blending Feeders are used for the processing of cotton, wool, and synthetics.



These machines have been designed by textile engineers long experienced in the development and operation of machinery for the textile industry. Salisbury Blending Feeders are precision manufactured of the finest quality materials and workmanship to render long and dependable service with a minimum of maintenance and operational cost.

GENERAL SPECIFICATIONS

The Salisbury Enclosed Blending Feeder has a heavy fabricated steel frame which makes it a rugged, durable, and trouble free unit. All gears and chains are covered with guards for safety.

Oilite bronze self-aligning bearings are used throughout, eliminating oil leakage and assuring clean fibres.

Provisions are made for the installation of automatic sprinkler head and vacuum lines. All usable waste fibres may be reclaimed from waste container.

Salisbury Blending Feeders are designed to allow installation of kick-off roll or combing attachment.

Either machine may be used in a blending line or in combination with a picker.

Both models are provided with ample storage space. This facilitates better blending of various fibres and requires less attention from the operator.

STANDARD EQUIPMENT AND SPECIAL EQUIPMENT

Standard equipment on either model includes all necessary pulleys for a flat belt drive. Additional parts for countershaft connection or individual motor drive can be furnished if desired.

Machines may be operated through a wide range of speeds with slight changes in driving mechanism.

Standard equipment on all models includes a No. 8 spiked vertical apron and a No. 11 horizontal apron. Other size aprons may be installed to meet individual needs at extra cost.

Distributed by Carolina Machinery Company

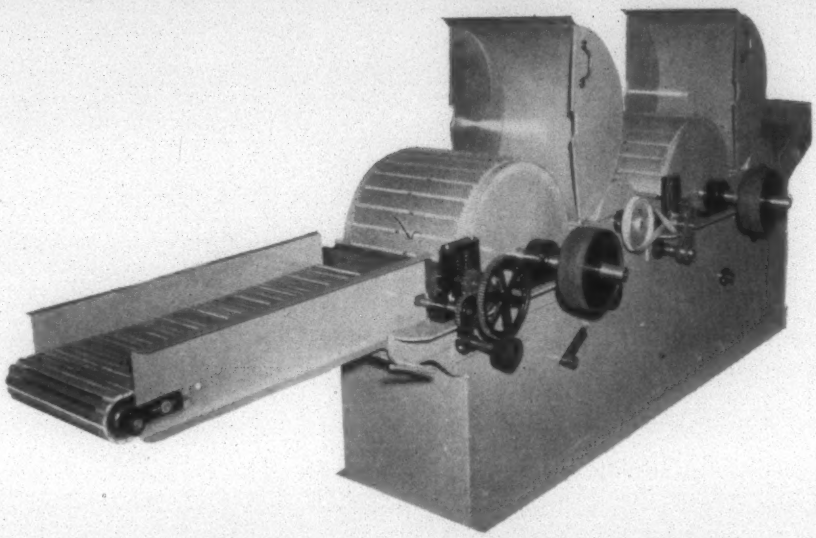
CAROLINA MACH

STEEL CREEK ROAD **Phone-3**

Manufacturers and Distributors ext

Announcing . . .

The New CMC Waste Machine



BUILT IN 1 TO 5 BEATERS

General Features

All parts are easily accessible and changeable, cutting repair time to a minimum.

Does not require Suction Fan or Dust Pit, thereby eliminating fire hazard.

Double Reversible Feed Rolls.

Beaters 30″ in Diameter, equipped with Ball Bearings and can be adjusted according to staple of your waste.

Compactly designed to require minimum floor space.

EARLY DELIVERIES

Write For Complete Details

Manufactured by Carolina Machinery Company

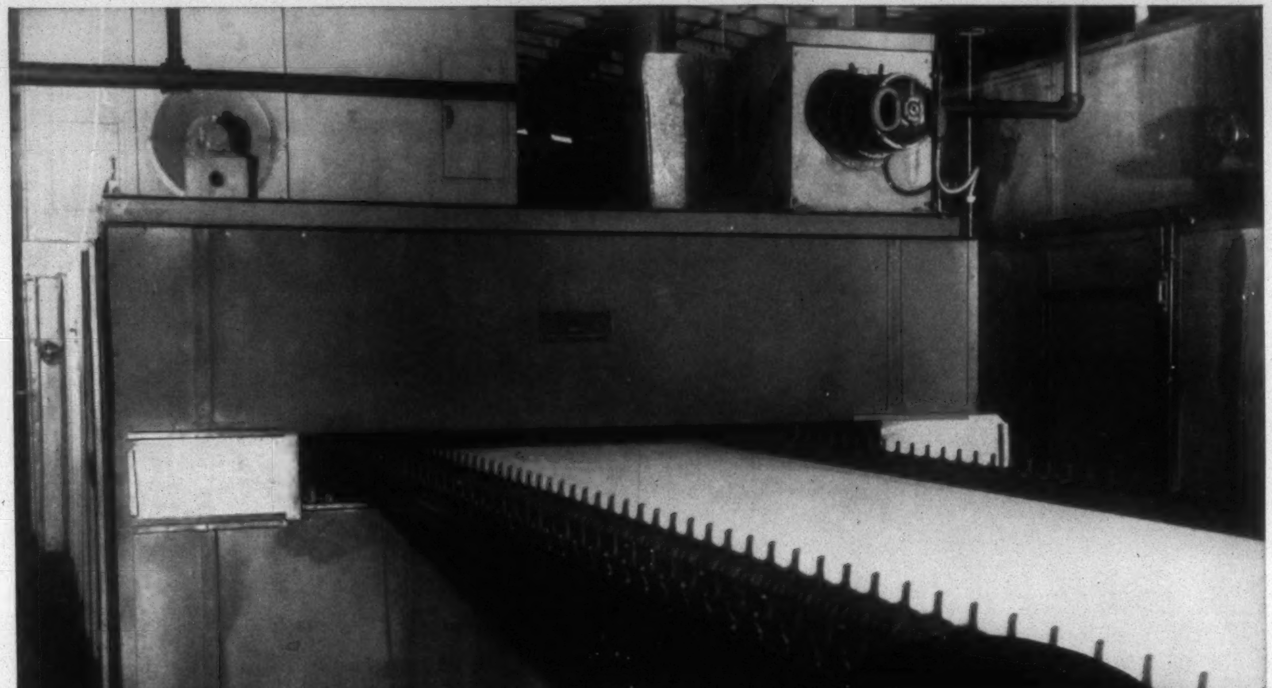
HNERY COMPANY

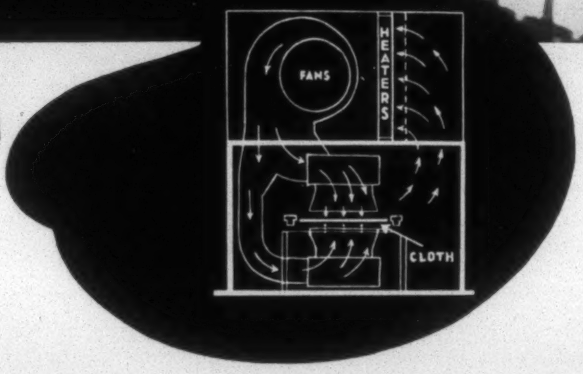
n -3612 **CHARLOTTE, N. C.**

s extile Machinery and Supplies

Unique air circulation makes possible

HIGH SPEED DRYING





PROCTOR *Super-Speed* SYSTEM

APPLIED TO

SINGLE RUN TENTERS

The factor which contributes most to the high speed operation that is possible with this modern system of tentering is *air circulation*. When a single run tenter is enclosed in a Proctor housing, air at high temperatures is impinged through nozzles against *both* sides of the fabric as it is carried through the drying chambers. Circulating through the goods, this penetration of uniformly heated air reduces drying time and increases output. The proper regulation of moisture in the air, so as to obtain speedy drying without harsh effects on the cloth, has an important bearing on the quality of the finished goods. Of course, output varies with individual plant requirements, length of the machine and the character and weight of the goods—but is always kept to a maximum by this system. Temperatures, air velocity and drying speed may be altered to suit a wide variety of fabrics and finishes. One of the most recent applications for this system has been in the drying of fabrics preparatory to curing. If the finishing of fabrics which must be held to width is part of your plant operation—investigate the decided advantages of the Proctor "Super-Speed" System applied to single run tenters.

PROCTOR & SCHWARTZ INC. P&S PHILADELPHIA 20, PA.

Rayon Reports

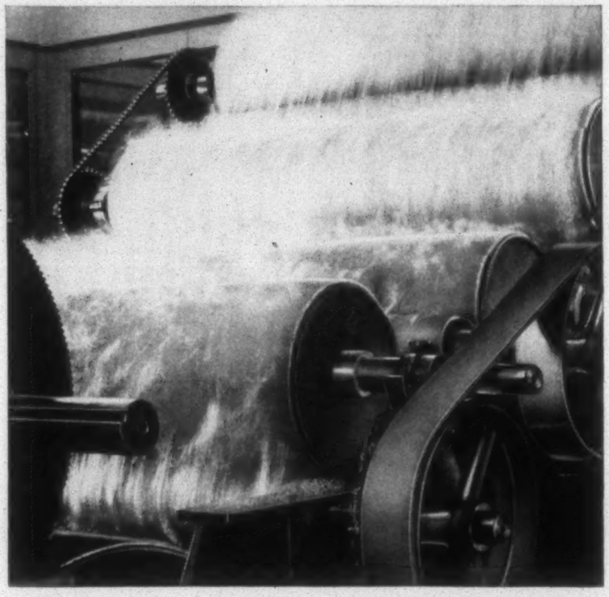
epared Monthly by American Viscose Corporation, New York, N. Y. FEBRUARY, 1947

Benefits of Rayon Staple to Woolen and Worsted Industries Reviewed

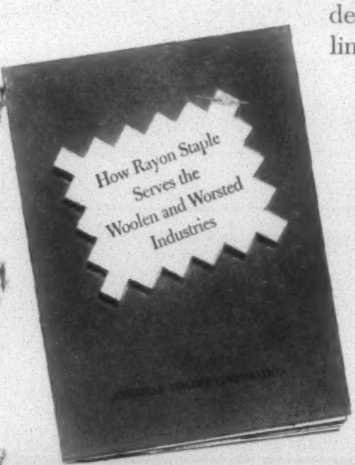
In a new booklet, "How Rayon Staple Serves the Woolen and Worsted Industries," the unique advantages that rayon staple brings to finished woolen and worsted blended fabrics are presented.

The booklet summarizes the economic advantages of rayon staple over rayon waste and garnets, then goes on to review several of the features of rayon staple that make it one of wool's best allies. Of major significance, the booklet points out, is the improvement of blends through the controlled characteristics of rayon staple.

The desirability of using rayon staple of varied lengths closely resembling the varied lengths of the specific wool to be blended is cited. The specific advantages that result from selecting rayon staple of specific deniers for blends are outlined, as is the correct usage of bright and dull luster fibers. The booklet also contains information on how to achieve new tones and effects through rayon's controlled color and dye affinity. In addition, it discusses other factors dealing with rayon staple's advantages in manufacturing economics. Copies of this interesting and comprehensive review are available without charge. Requests should be addressed to American Viscose Corporation, 350 Fifth Ave., New York 1, N. Y.



Shown above is one of the full-size textile machines installed in the Textile Research Department of the American Viscose Corporation. An important part of this department's work is the study of better techniques for blending wool with rayon staple, often in cooperation with woolen and worsted manufacturers.



MAKE USE OF 4-PLY SERVICE

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

1 FIBER RESEARCH
2 FABRIC DESIGN
3 FABRIC PRODUCTION
4 FABRIC FINISHING

AMERICAN VISCOSE CORPORATION

America's largest producer of rayon

Offices: 350 Fifth Avenue, New York 1, N.Y.; Charlotte, N. C.; Cleveland, Ohio; Philadelphia, Pa.; Providence, R. I.; Washington, D. C.; Wilmington, Del.

Plants at: Marcus Hook, Pa.; Roanoke Va.; Lewistown, Pa.; Nitro, W. Va.; Parkersburg, W. Va.; Meadville, Pa.; Front Royal, Va.

RAYON 20 YEARS AGO

New York manufacturers have turned to beautiful new fabrics of rayon and cotton to successfully reawaken a demand for housefrocks.

Rayon is to have a still wider use in men's underwear, if cable reports from Paris are correct. Men's fashion arbiters there have decreed that henceforth men's undergarments must be more decorative.

Instructions to laundry workers as to the kinds of rayon fabrics they will be called upon to handle, and the best way of so doing, is urged by the Laundryowner's National Association Fellowship of the Mellon Institute.

IRREGULAR PAGINATION

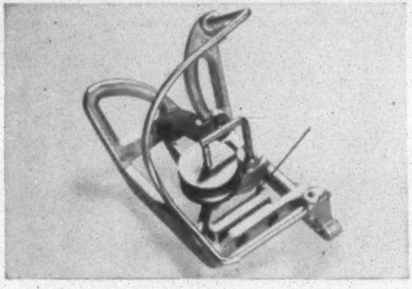
THIS IS NO. 61 OF A SERIES ON

GETTING THE MOST FROM WINDING

Information about winding designed to show improvements in winding equipment and new ideas in the winding operation

SLUB CATCHER ANVIL FOR ABRASIVE YARNS (Roto-Coner*)

A new anvil has been designed for the MacColl Slub Catcher which thorough testing has shown will stand up indefinitely with even the most abrasive yarns.



MacColl Slub Catcher Assembly with Slub Catcher itself removed to show "Carboloy" strip in front section of anvil.

A strip of "Carboloy" is inserted in the front section of the anvil where the yarn enters the Slub Catcher Assembly — the portion of the Slub Catcher subjected to the greatest wear. This use of "Carboloy" makes the anvil practically wear-proof.

The new anvil is installed in exactly the same manner as the standard anvil.

SPEED AND POWER REQUIREMENTS OF WINDING MACHINES

In determining the proper limits of operating speed for winding machines, it is necessary to consider a number of factors, including:

1. The economical life period of moving parts.
2. The type of supply.
3. Operative efficiency.
4. Strength and condition of material.
5. Volume of package.

"Precise-Wind" Machines

In all machines of the "precise-wind" type, there is a maximum speed beyond which the parts should not be operated. The cam is usually the critical element; at a maximum speed of about 250 rpm, the cam and the parts that reciprocate with it can be expected to last a long time.

The spindle speed is the speed of the cam multiplied by twice the number of winds (one traversing of the yarn in both directions). With a greater number of winds, the spindle speed can be increased without affecting cam speed.

Drum-Winding Machines

On drum-driven machines having cams, both the type of winding and the cam place limitations upon winding speed, although a somewhat higher cam speed is allowable than on machines of "precise-wind" type.

Machines fitted with the grooved traverse (Roto-Coner*) impose practically no machine limitation on speed, and the winding speed is restricted only by the type of winding and the strength of the yarn.

Yarn Supply

Some forms of yarn supply impose a limit on the speed of the machine because of the difficulty in withdrawing the yarn from the container. When winding from revolving supplies, such as skeins and spools, the yarn speed must be reduced to a speed where the supply will not overrun when an end breaks or where the strain upon starting the spindle is sufficient to cause the end to break.

When winding from a revolving supply to a large-diameter package, it is also necessary to reduce spindle speed if the yarn is of a type not strong enough to withstand tension due to the high yarn takeup speed at the large diameter.

Type of Yarn

When winding more than one end, the maximum yarn speed must be such that a broken end or the inside end from the supply container will not reach the winding package before the spindle stops.

The requirements of the winding package also make a difference. Warping cones and tubes, for example, can be wound at much higher speed than, for example, knitting cones.

Yarn with a minimum of twist or of poor quality may have to be wound at slower speed to prevent an unreasonable amount of breakage. Very large packages must be wound slowly because of their bulk.

SPEED AND POWER REQUIREMENTS

Machine	Supply or Winding Pkg.	Spindles	Speed	Power
6C	Unrolling	1	600-900 RPM	¼ HP
		6	600-900 RPM	1 HP
7	Unrolling	1	500 RPM	1 HP
8	Overend	1	700-1000 RPM	¼ HP
		6	700-1000 RPM	1 HP
9	Unrolling Spools	1	800 RPM	1 HP
10	Single-end	1	1400-1800 RPM	1/12 HP per sp
	Multiple-end	1	1000 RPM	1/12 HP per sp
30	Overend	8	up to 1250 RPM	½ HP
42	Overend	42	400 RPM	7½ HP
40 & 44	Dyeing packages	100	325-500 YPM	6 HP
	Paper cones and tubes	100	500 YPM	6 HP
	Wood cones	100	750 YPM	6 HP
45	Unrolling — Tight & Loose Pulleys	1	275-375 RPM	1 HP
		5	275-375 RPM	3 HP
	Overend — Clutch Drive	1	375-600 RPM	1 HP
		5	375-600 RPM	3 HP
50	Coning	6	up to 1250 RPM	½ HP
		12	up to 1250 RPM	¾ HP
	Tubing	12	up to 1250 RPM	¾ HP
	Skein Supply	12	300-600 RPM	¾ HP
	Elastic Yarn	12	500 RPM	¾ HP
	Unrolling Supply	12	500 RPM	¾ HP
	Multiple-end	12	600 RPM	¾-1 HP
60		96	Cam Speed up to 280 RPM	3 HP
	Coning		500 YPM	
	Paper Tubing		500 YPM	
	Wood Tubing on Spring Holder		500 YPM	
	Wood Tubing on Spindle		350 YPM	
	Swift Supply		200 YPM	
	Runner Supply		150-200 YPM	
	Slub Trap Attachment		250 YPM	
	Multiple-end		300 YPM	
90			5 Wind 7 Wind 10 Wind	
	Overend	20	2000-2300 2300-2400 2300-2400 RPM	¾ HP
	Unrolling	20	1500-2000 1500-2000 1500-2000 RPM	¾ HP
	Skein	20	1500-2000 1500-2000 1500-2000 RPM	¾ HP
99	Cones	56	4800 RPM 7 Winds	5 HP
150	Coning	6	up to 1250 RPM	½ HP
		12	up to 1250 RPM	¾ HP
	Tubing	12	up to 1250 RPM	¾ HP

See our Catalog in TEXTILE WORLD YEARBOOK
23.6.4

*Reg. U.S. Pat. Off.

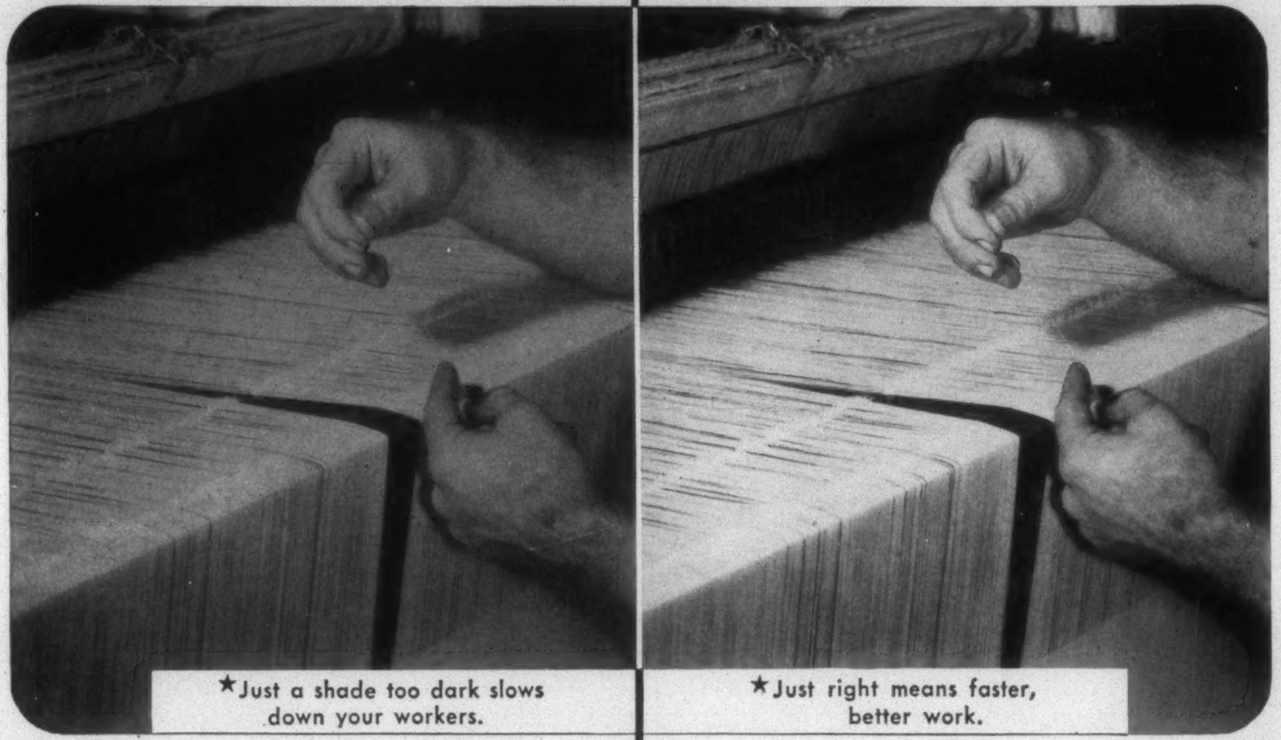
January 1947

UNIVERSAL WINDING COMPANY

PROVIDENCE · Boston · Philadelphia · Utica · Charlotte · Atlanta · Chicago · Los Angeles · Montreal and Hamilton

BORDERLINE VISION*

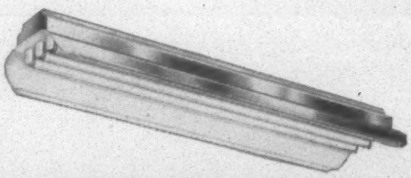
Means Production Line Slow-Downs



★Just a shade too dark slows down your workers.

★Just right means faster, better work.

For Faster, Better Work Install Wheeler Skilled Lighting



All-Steel Open-End Fluorescent Unit

Available for two or three 40-watt, or two 100-watt lamps. Broad wiring channel with accessible, enclosed ballast. Mounts from chain or conduit, individually or in continuous runs.

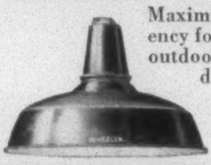
Borderline Vision is hard to spot at a glance. But watch out . . .

Every time a worker in your plant has to stop for a second look – you lose money! Every time he fails to stop and the work is wrong – you lose money! Lighting just a shade too dark causes little slow-downs that add up to an expensive lag in production.

For 65 years Wheeler has specialized in light engineering that eliminates lighting handicaps. Wheeler Reflectors are engineered to put light to work where it belongs – on the job. Their special, high reflection factor gets maximum illumination from standard lamps. And their rugged, porcelain, enameled construction means long service and easy maintenance.

Better work and reduced costs are almost automatic when you install Wheeler Skilled Lighting. Learn why! Write today for facts on the full line of Wheeler incandescent and fluorescent lighting fixtures. **Wheeler Reflector Company, 275 Congress St., Boston 10, Mass.** Representatives in New York and principal cities.

Distributed Exclusively Through Electrical Wholesalers



RLM Solid Neck Incandescent Reflector

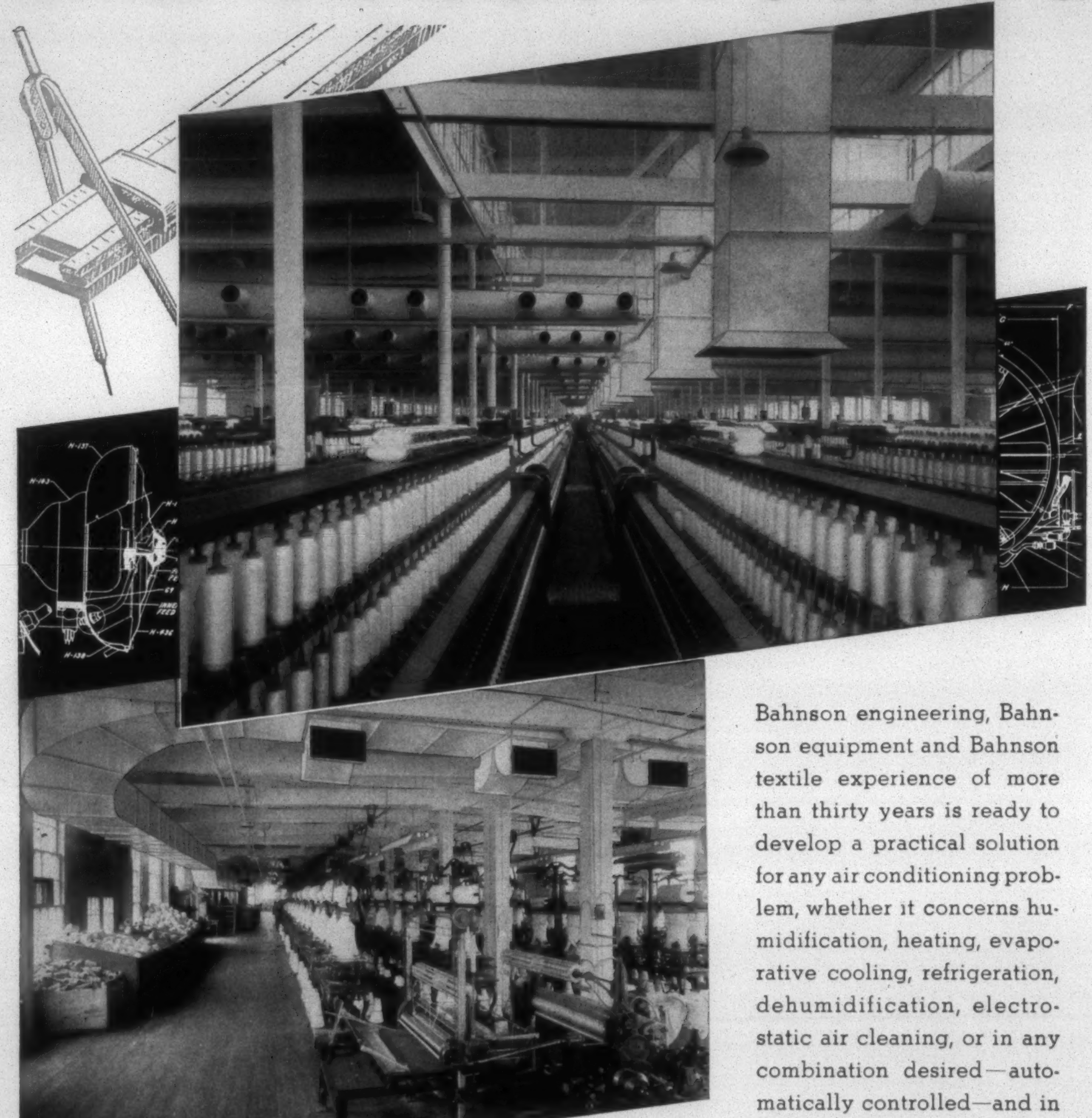
Maximum lighting efficiency for either indoor or outdoor use. Expertly designed, ruggedly built. 75 to 1500 watts.

Wheeler Reflectors

SKILLED LIGHTING

MADE BY SPECIALISTS IN LIGHTING EQUIPMENT SINCE 1881

ENGINEERED
AIR CONDITIONING



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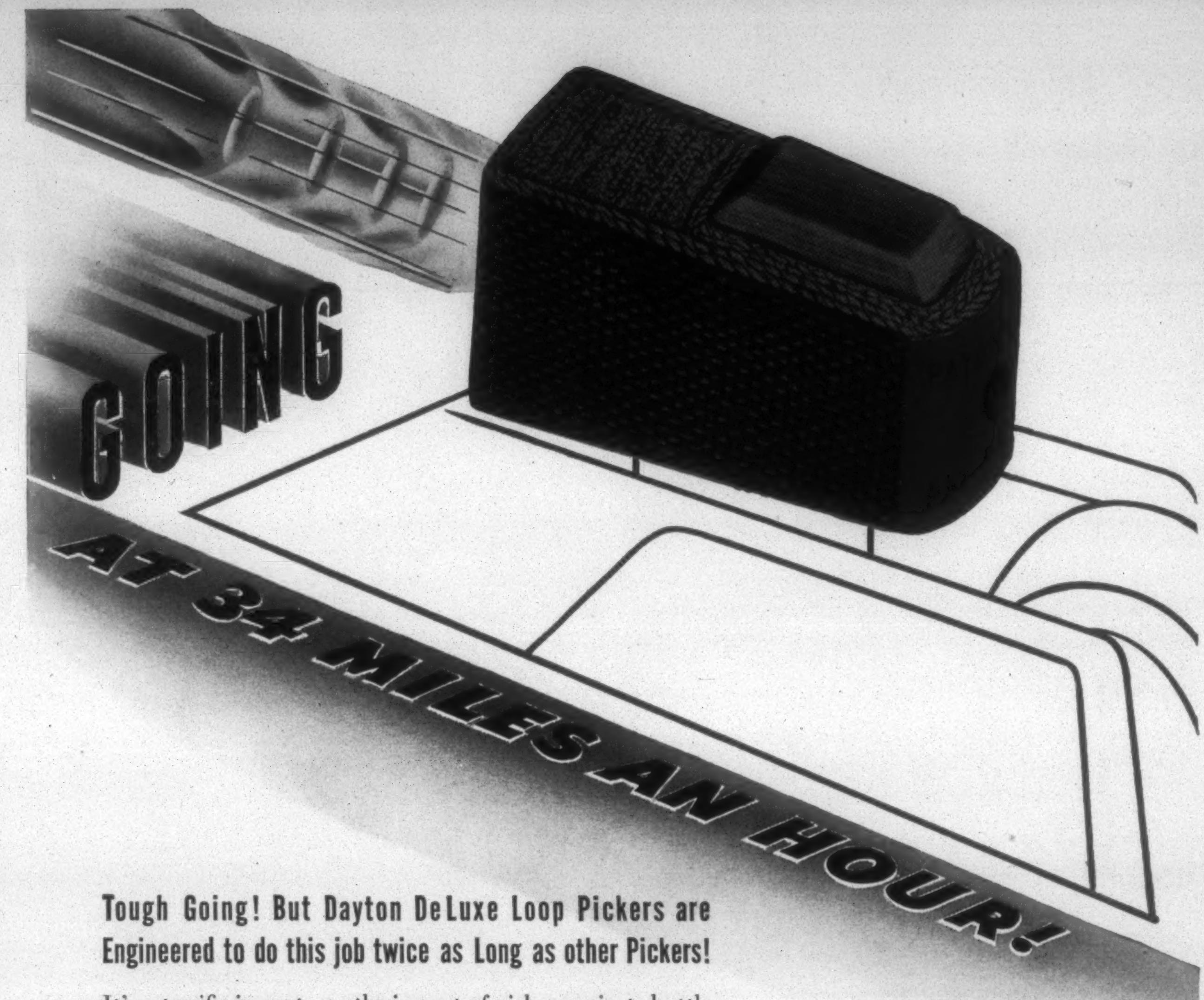

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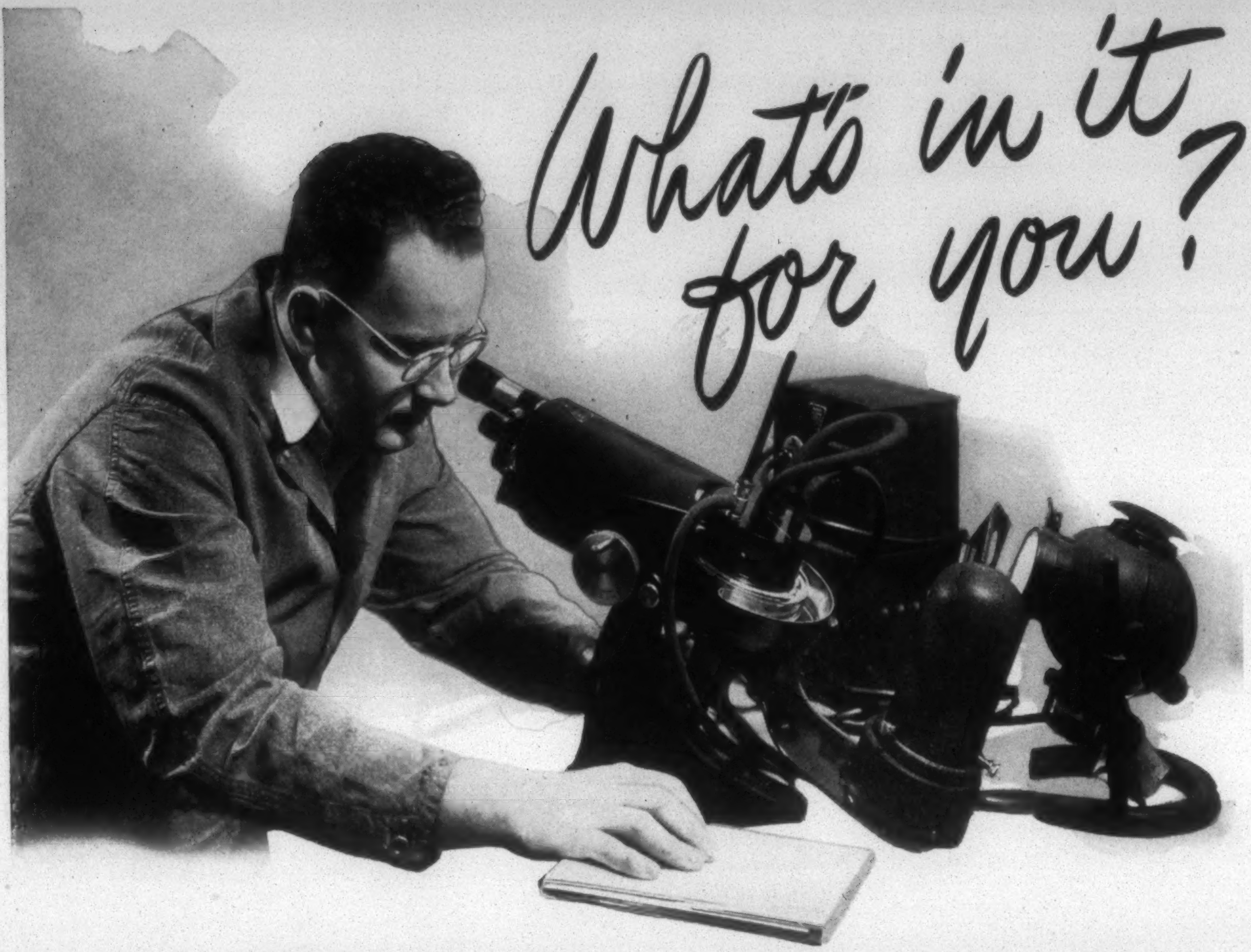

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ABP textile bulletin ABC

Vol. 71 February 15, 1947 No. 12

Worsted Yarn Spinning On the American System

By R. J. McCONNELL, Vice-President, Whitin Machine Works
—Before American Association of Textile Technologists—

MY subject, "The Spinning of Worsted Yarns on the American System," is one that might well be called "hot." For the past year or more there has been more interest in it on the part of mill men than in any other phase of our business. There has been a steady stream of visitors coming to our shop to discuss this system with us, and as you have probably noticed, the textile papers and magazines have been running a great many articles on this subject. Rumors of all kinds have been circulated and as usual most of these were not based on fact, and a great deal of inaccurate information has been spread about.

My intention is to try to give you as completely as I can a factual account of our experiences, the types of machinery we use in making worsted yarns, how it is operated, the lengths of fiber we can process, types of yarn and numbers we can spin, labor requirements, etc.

First, let me point out that the machinery we use to process worsted fibers cannot be used to process fibers shorter than 1½ inches. As there is not very much cotton in the world this length, and longer, it is rather out of order to call it the cotton system. The roving and spinning frames we use were especially developed for long staple rayon fibers, and were built to process fibers up to 3¼ inches in length. At first, we also used our L2 drawing frames which were designed for long staple rayons but we had to design new drawing in order to process the worsted fibers successfully. I will explain these machines more in detail later.

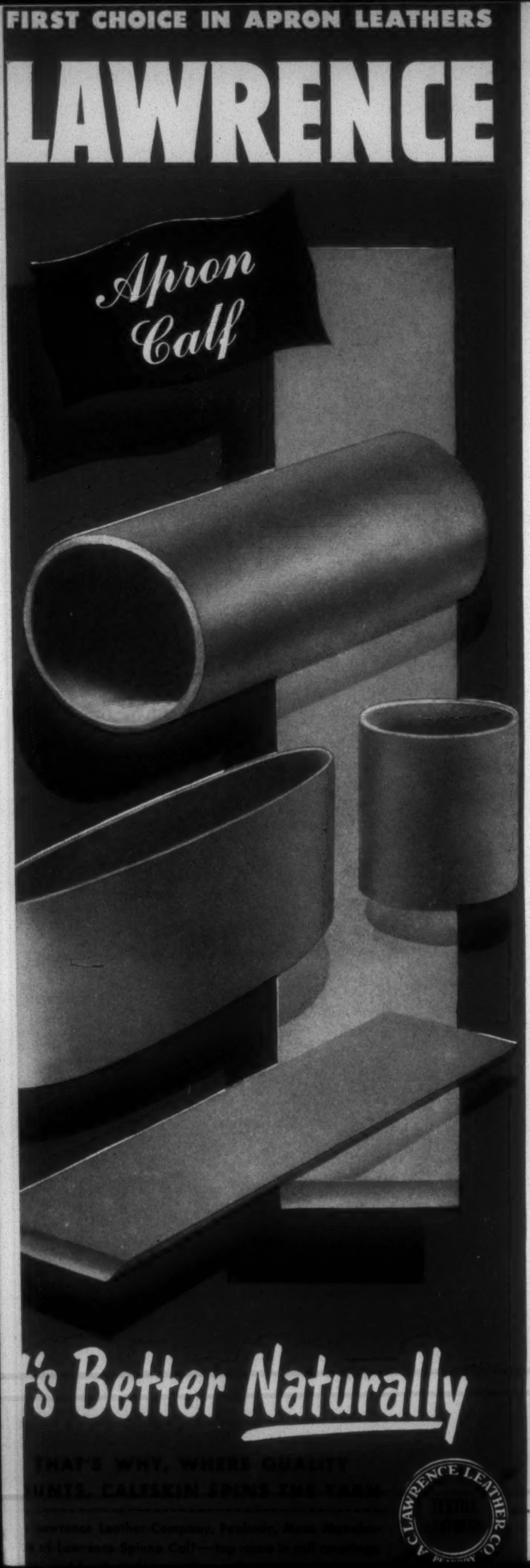
The first time we processed worsted yarns on this system was in 1938 when a few of our customers asked us to run some worsted tops for them and make some yarn. At first, we looked on it as more or less of a stunt and were not particularly interested in spite of the fact that the people for whom we made the yarn told us it was all right. For the next few years, we made samples for several mills and received varying reports, some good and some bad, but we were still only interested in the fact that we could make worsted yarn on these machines. It was during this time that a few mills, including Newnan where our equipment was used, began to make worsted yarns on a commercial scale. About 1943, interest began to develop rapidly and we were called upon more and more to run samples for a number of worsted mills. By this time, we had learned a great deal about processing worsted fibers and had made some changes in our equipment which improved the functioning of the machines and resulted in much improved yarns. While interest increased steadily, because of the war no machinery was built for this purpose as our whole production was on war materials and priority textile equipment used in the war effort.

The equipment we build today for processing worsted fibers on this new system consists of the following types of machines: first, drawing arranged in three processes; second, super-draft roving frame; third, Whitin improved long draft spinning frame. There are five processes altogether.

The drawing frames are of two Models LWB breaker drawing and LW intermediate and finisher drawing. These draw frames are all four-delivery heads. The drafting and coiling mechanism are the same in all three lines but the LWB frame is built to take care of the unwinding of the top. Special attachments are used to regulate the unwinding so that the top will be presented to back roll of frame in a flat sliver with all false twist removed. The LWB and LW models are equipped with four lines of metallic rolls, top and bottom, 1½ inches in diameter. These models do not have calender rolls as on regular drawing but the coiler gears are made with small calender rolls in each plate. This change was necessary due to the great amount of static electricity created which made it almost impossible to coil and deposit the sliver in the can with the regular tube gear used on all other types of drawing. We also adopted a gyrating can table in place of regular revolving type. This was done to eliminate all twist in the sliver in can. All three lines of drawing are equipped with static eliminators without which it would be difficult to run.

The first drawing, LWB, adds nothing to our system from the standpoint of improving quality. The only function it performs is to reduce the weight of the top from an average weight of 250 grains per yard to 50, and coils the sliver in the can. There are no doublings and while some parallelling of the fibers takes place, any benefit derived from this is doubtful. However, from standpoint of economy, it can be done for much less than extra charges of top makers for furnishing 50-grain sliver in cans or packages. Five cans are put in back of each delivery of intermediate drawing, and with a draft of five, reduced to 50 grains, and coiled in the can. This process is repeated in finisher line and sliver is then ready for creeling in super-draft frame. All frames are equipped with regular top motions, front and back.

The matter of roll settings was quite a problem, as one of



THAT'S WHY, WHERE QUALITY
UNTS, CALFSKIN SPINS THE YARN

awrence Leather Company, Peabody, Mass. Manufac-
of Lawrence Spinna Calf—top name in roll coverings.

our technicians expressed it, it is more of an art than an exact science, particularly when the sorting has not been good. On the breaker drawing with the thick bulky top, we usually set the first roll 1/8-inch to 1/4-inch over the mean staple length, the second to third 1/2-inch over mean length, and third to fourth 3/4-inch over. On intermediate and finisher drawing, we reduce the settings to 1/8-inch between first and second over mean length, and increase this by 1/8-inch in next settings.

With these settings the longest fibers are broken but no apparent effect is noticed in ultimate yarn, and by breaking the small percentage we do of long fibers, it allows us to set more closely in subsequent operations which gives better control of the short fibers which are the biggest problem in making good yarn. In some cases where the stock is too long to process on the four-roll system of drawing, we remove one roll. We have found that we can produce, with the longer fibers, just as even sliver.

The draft distribution back to front is 1.31 x 1.60 x 2.40. The front roll speed is usually at rate of 100 feet per minute but we have run as high as 170 feet per minute with good results. At 100 feet per minute and 85 per cent efficiency with 50-grain sliver, the production is 12 pounds per delivery per hour. The cans are 12 inches in diameter, and when full contain about 12 pounds of worsted sliver. In this drawing process we have 25 or 36 doublings, depending on whether five or six ends are put on back of intermediate and finisher drawing or a total of 25 doublings.

From the finisher drawing, the stock goes to the roving frame. This frame is the Whitin-Woonsocket super-draft, Model G8, Type C4. It has special large rolls, roll stands and cradles. There are two drafting fields between which are the quarter turn plates that guide the sliver or roving so that the selvages are top and bottom, and the stock which, at this point, is in the form of ribbon, enters the apron rolls standing on edge. The back drafting section consists of two lines of 1⅜-inch bottom steel rolls with cushion covered top rolls. The front drafting section is our improved double apron long drafting system with top apron roll being gear driven to prevent any possibility of slip. The RE18 cradle is used which allows tensing of the bottom band. The top rolls and aprons are weighted. Material used for top roll covering may be leather, cork or synthetics, and aprons may be leather or synthetic. The roving frame can be made in any of standard sizes. Up to now, the 8 x 4 x 7-inch has been almost universally used. Roving from two to six worsted count can be made on this size frame. The package contains about 15 ounces net of roving. The normal speed of this size frame is 1,150 revolutions of the spindle per minute but due to low twist used in making worsted roving, the speed is usually from 750 to 900 R. P. M. The amount of twist inserted in the roving varies from 0.6 to one times square root of number, depending on staple used, and hank roving being made.

Roll setting of front section is not changed and is 3½-inch; second to third is not adjustable and is $3\frac{7}{16}$-inch; third to fourth rolls are set 1/4-inch over the mean staple length. Top rolls are rather heavily weighted, 36 pounds on front roll, 15 pounds on second and 25 pounds on each of third and fourth top rolls. The overall distance from front to back rolls is 11 inches. Draft distribution is arranged so that most of the draft is in the front or apron section. For example, if the total draft was 18, we would draft 3.3 in back section and 5.4 in front. The efficiency on these frames varies with length and runs from 80 per cent on 138-spindle frame to 87 per cent on 72-spindle frame on worsted hank of 4.5. End breakage on 4.5 hank should average three to four ends per 100 spindles per hour. Production on 4.5 hank worsted at 85 per cent efficiency and spindle speed of 750 R. P. M. would be .30 pounds per spindle per hour.

The next and final process is spinning and the frame used is our Model F2. We have been using frames of four-inch gauge, 240 spindles, oil lubricated rings, usually 2½ inches in diameter, eight-inch traverse, reverse twist and tape drive. Up to roller beam, this frame is practically our standard cotton type frame. From roller beam up, it is special. The roll stands are our high roll 30° angle type to minimize the pull on the yarn. Steel rolls are 1⅜ inches in diameter, apron rolls are gear driven and drafting principle is double apron type. Top roll weighting arrangement is designed so that frame can run with or without break draft. The creel can be either standard or umbrella type, depending on what size roving bobbin is to be run in the creel.

Spindle speeds up to 7,200 R. P. M. have been run, depending on number of yarn desired and amount of twist required. On coarse numbers, for example 8s with 3½ turns of twist, the spindle speed would be around 3,000 R. P. M.; spinning 36s with 15 turns, it would be 7,200 R. P. M. The ratch on spinning is seven inches, divided about equally between front and apron roll and apron roll to back.

Overall weighting on top rolls is 51 pounds. Maximum draft advocated is 14. When regular weight distribution is used, the break draft is 1.3 and balance of draft is between first and second or apron rolls. Efficiency on spinning averages 92 per cent on 36s worsted count.

Actual end breakage tests under mill conditions have run as low as eight ends per thousand spindles per hour. A good average would be 25 to 35 ends per thousand spindles per hour. From the top to finished single 36s on the American system, there are five processes and usually 50 doublings.

Conservative work loads for this system would be as follows: LWB drawing, 20 deliveries per operative; LW intermediate and finisher drawing, 32 deliveries per operative. This means that tending, cleaning and doffing 20 deliveries of LWB drawing with production of 336 pounds per hour and 32 deliveries of LW intermediate and finisher drawing with production of 448 pounds per hour per operative would be a fair job. The reason for difference in work load between LWB and LW drawing is that it takes more time to arrange the top of unwinding and there is also more end breakage on the LWB process.

On the super-draft roving frame on 4.5 hank worsted, one operative per two frames of 120 spindles each, operative doing cleaning, creeling and tending, would have a very generous fatigue allowance. On spinning with spindle speed of 7,200 R. P. M., and running 36s worsted at production of .036 pounds per hour, eight sides of 120 spindles each or total of 960 spindles would be a fair job with average end breakage of 35 ends per thousand spindles per hour. Doffers can handle 800 bobbins per hour. Other jobs such as oilers, cleaners and section hands in general would be same as on regular cotton machinery.

With regard to length of fibers which can be processed on the American system, 56s to 64s top with a maximum length of four inches gives

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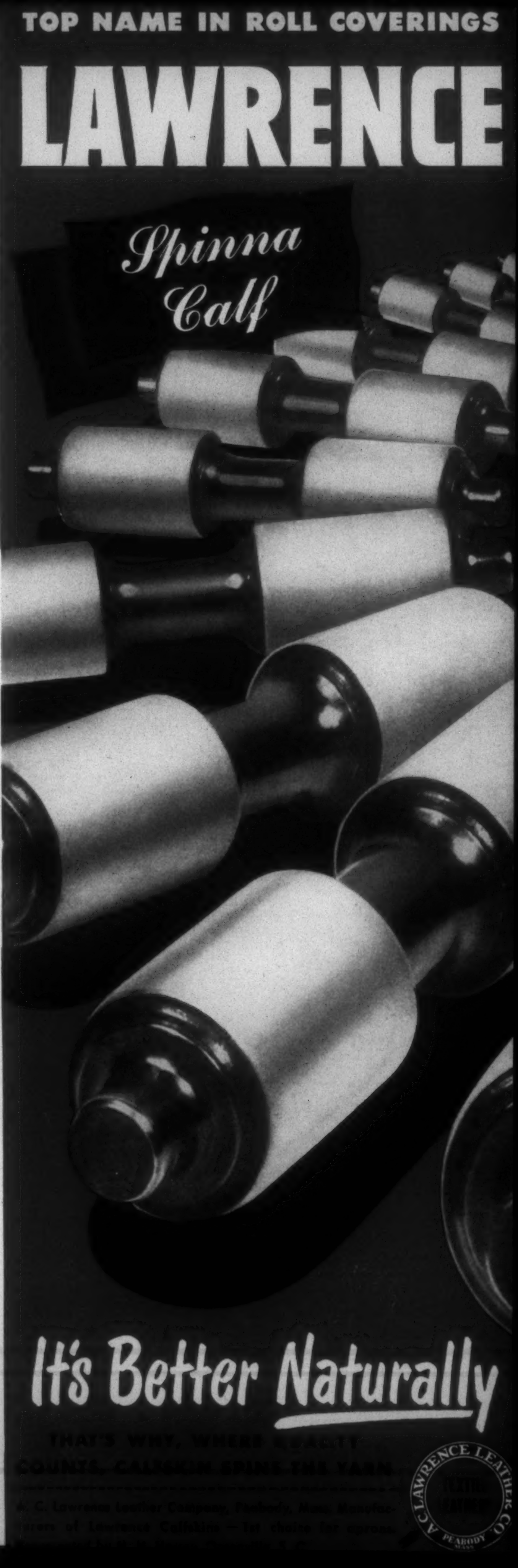

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Cotton Council Goes Into High Gear

ATTENDED by almost 1,000 members of the cotton industry, the National Cotton Council's ninth annual meeting held at Galveston, Tex., Jan. 28-30, marked the beginning of the most ambitious action program ever undertaken by the raw cotton industry. Keynoted by the annual message of President Oscar Johnston and an address by Secretary of Agriculture Clinton P. Anderson, the meeting featured the development of the council's 1947 program in sales promotion and public relations, production and marketing, utilization research, foreign trade, and general activities. The general activities section of the 1947 program plans sets up council policy on such subjects as labor relations, statute of limitations, the Fair Labor Standards Act, and government imposed standards of flammability.

Mr. Johnston, cotton grower of Scott, Miss., was unanimously elected president of the council for his ninth consecutive term by the organization's board of directors on the closing convention day, Jan. 30. To serve with him the board named as vice-presidents Harold A. Young of North Little Rock, Ark., H. L. Wingate of Macon, Ga., and L. T. Barringer of Memphis, Tenn. W. T. Wynn of Greenville, Miss., was re-elected treasurer, and Rhea Blake of Memphis was chosen to succeed himself as executive vice-president and secretary. Lowell Taylor, also of Memphis, will continue to serve as general counsel.

Directors for 1947 chosen by the 244 official delegates include the following executives of the cotton spinning industry: Hugh M. Comer, president of Avondale Mills at Sylacauga, Ala.; Charles C. Hertwig, vice-president and treasurer of Bibb Mfg. Co. at Macon, Ga.; Ernest Rees, president and manager of Elk Cotton Mills at Fayetteville, Tenn.; Fred W. Symmes, vice-president of F. W. Poe Mfg. Co. at Greenville, S. C.; and A. K. Winget, president and treasurer of Efird Mfg. Co. at Albemarle, N. C.

Production and Marketing

In the field of production and marketing, the delegates approved resolutions calling for increased research leading to greater cotton production and marketing efficiency through: mechanization, insect and disease control, farm management, cotton genetics and breeding, soil management and fertilization, preparation and ginning, warehousing and compressing, marketing practices and costs, quality studies of lint and seed, market outlets by quality, marketing services, and local grading of cottonseed and studies of practices and costs. Committee recommendations that the council undertake a broad educational program in co-operation with other agencies also were approved. This program will involve informational and educational activity on such subjects as mechanization, one variety planting, grade improvement, lint identification, insect and disease control, farm management, fire prevention, and reduction of weather damage. The council also went on record favoring a permanent domestic farm labor program in the Department of Agriculture, administered by the extension services, and urged that the government refrain from placing further restrictions on the cotton futures markets until regulations recently put in effect by the exchanges have an opportunity to demonstrate their effectiveness.

Utilization Research

The committee on utilization research, headed by Walter L. Randolph of Montgomery, Ala., was given unanimous approval in its recommendation that the council conduct a nationwide educational campaign to demonstrate to the American people that cotton must be provided with an adequate research program and that the cost of the program would be small in comparison with the benefits to all segments of the nation's economy. The council also asked that Congress expedite in every way possible the full appropriations authorized under the Research and Marketing Act of 1946, and that the council's own research division expand its work in market and technical research.

Foreign Trade

Recognizing the importance of foreign markets to the American cotton industry, the delegates adopted resolutions calling for improvement of relations with the Spanish Government which would allow greater cotton trading with that country which formerly called on the United States for two-thirds of its raw cotton requirements. The foreign trade committee resolutions were approved asking for continuance of economic research by the council staff and government and United Nations agencies which will lead to greater knowledge of cotton's foreign market possibilities and consumer purchasing habits abroad. It was also urged that the State and War Departments complete promptly plans to supply American cotton to Germany and Japan in co-operation with the private trade, and that the Export-Import Bank be provided with sufficient resources to extend short-term self-liquidating credit for maintaining and expanding cotton exports during the 1947-48 crop year.

Sales Promotion

Expansions in the council sales promotion program recommended by Senator N. C. Williamson of Lake Providence, La., committee chairman, were carried without opposition. The principal immediate expansion in the program is in the wearing apparel and household field where work will be undertaken along cotton educational lines among sales personnel engaged in the retail or wholesale distribution, or the advertising and promotion, of products containing cotton fiber, and among the women's clubs of the nation.

The council will continue its present fashion campaigns and the joint industrial campaigns with the Textile Bag Manufacturers Association and the Cotton Insulation Association. In addition it will explore opportunities for further joint campaigns, especially the full revival of the pre-war "Cotton Freshness" campaign. Delegates also voted to make every effort to correct misrepresentations in advertising with respect to the relative

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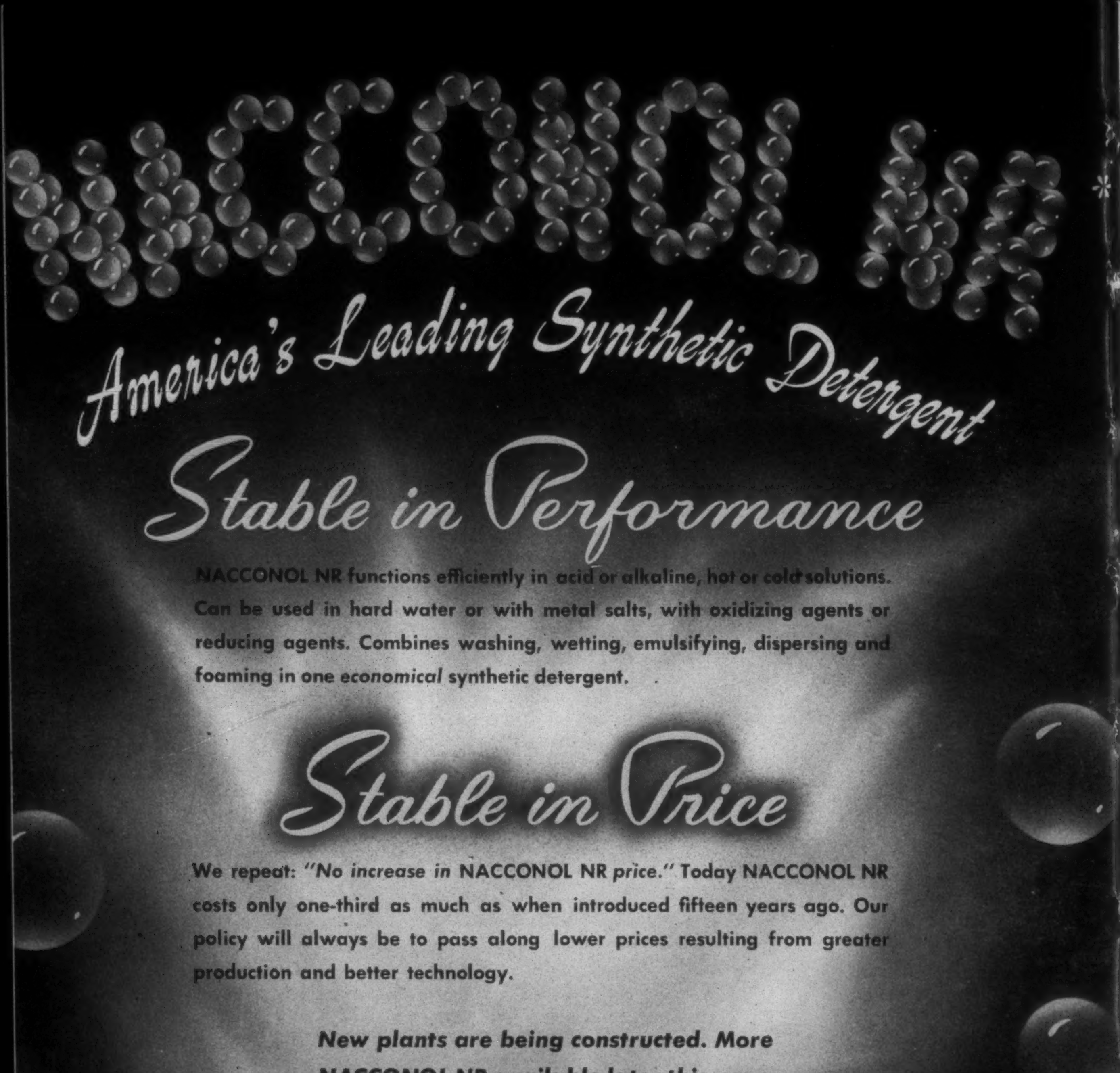

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Worth Street Merchants Size Up Cotton Textile Market Situation

BASICALLY strong conditions of demand in the primary markets for cotton textiles are in sharp contrast today with the unfavorable predictions of business analysts and with some disposition to hesitancy in the field of retailing, W. Ray Bell, president of the Association of Cotton Textile Merchants of New York, stated Feb. 4 in his report at the annual business meeting of the association, held at 40 Worth Street, New York City.

"Professional economists and business analysts generally have been predicting anything from a minor price shakedown to a total collapse of our markets for the current year, with the time usually set for the second quarter," Mr. Bell noted. "Yet on the other hand the primary market situation has continued exceedingly strong, with many lines on an allotment basis, and premiums paid for spot goods of certain scarce constructions."

At the business meeting four new directors of the association were elected for three-year terms: including Donald Comer, Jr., of Southeastern Cottons, Inc.; Richard G. Conant of Wellington Sears Co.; Robert T. Stevens of J. P. Stevens & Co., Inc.; and Donald B. Tansill of Pepperell Mfg. Co. In addition to the president's report, the reports of the treasurer, R. Edgar Benson, Jr., of Woodward Baldwin & Co., and of the secretary, John L. Severance, were submitted.

Mr. Bell pointed out that there are many supporting factors in the primary market situation. One of these is the wide advertising of possible trouble ahead, which tends to prevent excess inventory accumulation which was a prime factor in market upsets of other years. Another is the discouragement of speculation for a further rise in textile values. In so broad a market as textiles generalities are difficult with variations necessarily present, but goods are moving rapidly in most important market divisions. The true basic strength of the market lies in the field of high consumer income which is exerting itself in the direction of using up many items at about the rate they are being supplied. He pointed out that the primary market must supply industrial, export and other lines beyond the apparel division, and that demand is urgent from many quarters. In apparel items it likewise is necessary for the primary market to exercise broad judgment in anticipating the needs of retailers weeks and months ahead.

Nevertheless, he warned, "while the situation as a whole clearly demands that we continue to produce a very large volume of goods, the same situation does not require us to over-produce particular items when they may show a tendency to get out of hand. We too must watch our inventories. If we keep our house in order, if we produce to the market demand, if we are careful in the selection of the types of merchandise we offer, if we leave no stone unturned in opening up new markets, then we may well go forward with no more than the normal ups and downs that inevitable errors in a market so broad must create."

Annual Forum and Dinner

A four-point program for moving into consumption the prospective abundance of 1947 cotton textile production, involving the selection of good and wanted merchandise, the avoidance of heavy inventories, and close pricing to hold the industry's share of the consumer dollar, was outlined by Albert W. Hughes, president of J. C. Penney Co., Inc., at the annual A. C. T. M. forum and dinner held at the Ritz-Carlton Hotel in New York Jan. 30.

Declaring for a sound program "intended to sell merchandise and to sell it at a profit, both in 1947 and in the years ahead," Mr. Hughes held that buyers and store managers should first "quit gambling on questionable items and buy only good merchandise, the kind our customers want." Second he favored buying merchandise only as it sells, for definite limited periods ahead, and not piling up "inventories that may be out of date and unwanted before they are sold." Third, mark-ups must be watched to keep cotton competitive with other textiles and with hard goods now coming in, so that cotton goods will not price themselves out of the market. Lastly, the industry must sell, and sell, and sell, "as we used to sell, and as we haven't sold since before the war."

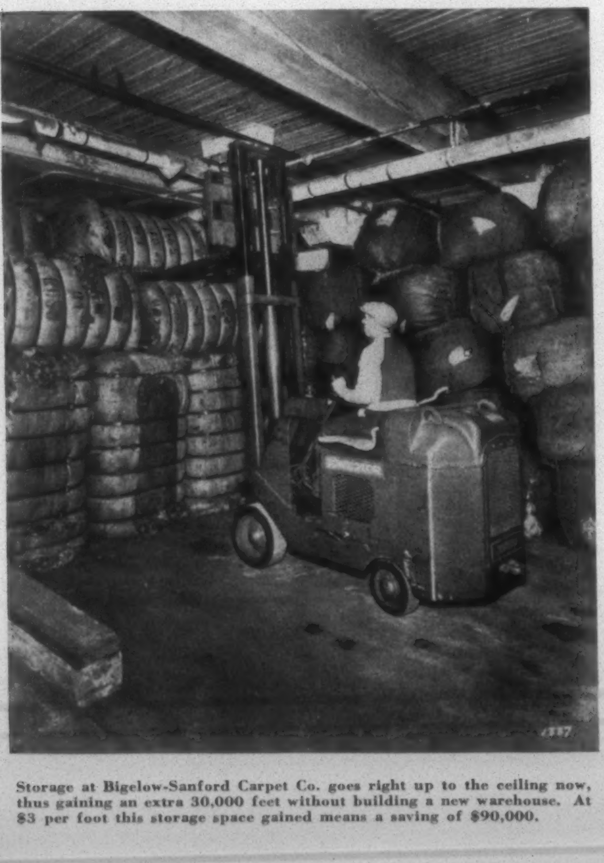
The forum, as explained by W. Ray Bell, president of the association, who introduced the speakers, was designed to afford the more than 400 textile merchants assembled a perspective of major developments facing the industry under peacetime conditions and market freedom. Mr. Hughes presented the views in distribution at the retail level at which prices and products are now being tested out in the light of the trend back to more normal conditions. Ward Delaney, of the Institute of Textile Technology, Charlottesville, Va., reported on the significance of textile research to the Worth Street primary markets. Public relations of the industry were dealt with by a team of speakers, consisting of G. Ellsworth Huggins, chairman, the Cotton Mills Industrywide Committee on Public Relations; Pendleton Dudley of Dudley, Anderson & Yutzy; and G. Edward Pendray. The speaking program at 4:30 o'clock was followed in the evening by the annual dinner and an entertainment program.

Mr. Hughes held that in war the industry had worked under the law of "scarcity and demand" instead of supply and demand. Today he said the picture is changing. Retailers need to return to fundamental principles which are the same principles on which Worth Street trade is founded. Consumers today want good constructions and will no longer buy "junk." He stated his own company in 1946 took the highest mark-downs in *(Continued on Page 65)*

Industrial Trucks in Textile Manufacturing

ONLY the most modern technology, spurred by the necessity for handling ever-increasing floods of manufactured products, could have conceived a machine so utterly functional, so entirely flexible and so perfectly adapted to the large-scale movement of materials as the industrial power truck. Industrial trucks have come of age, and in thousands of plants throughout the country they are saving time, expense and materials and paying for themselves in remarkably short periods of time.

The businessman is a producer-spender. His expenditures have one end in view—to make two dollars grow where one grew before. He originated the adage, "You have to spend money to make money." In the face of vigorous competition for his dollar by the suppliers of goods and services, he has to weigh one expenditure against another in terms of potential profits or savings. During the earlier stages of mass production in the United States the trend of industrial spending was toward plant expansion, with management striving continuously for increased production through improvement in processes and the replacement of obsolescent tools. Through the years growing competition operated to limit markets and to push prices downward. Management met the threat to profit margins by pouring money into technological improvements in productive machinery. In many plants throughout the country the point of diminishing returns in this direction has been reached. It is inevitable that alert management should commence looking for savings along other lines, and in plant transportation has been found a field for investment which pays a gratifyingly high return.



Storage at Bigelow-Sanford Carpet Co. goes right up to the ceiling now, thus gaining an extra 30,000 feet without building a new warehouse. At $3 per foot this storage space gained means a saving of $90,000.

There is little doubt that material handling is the most neglected of industrial functions. The methods to be found in many plants today not only are costly in themselves but create bottlenecks which seriously circumscribe the productive capacity of the most modern machinery. Engineers are asserting that for want of plant transportation in the right place at the right time there is drastic loss in man and machine hours each day in American industry.

Critics may be oversevere, but they have a strong basis for stressing importance of materials handling. Consider a simple but typical manufacturing process. Raw material is unloaded from a boxcar and stored (handling). It is requisitioned and carried to a producing department (handling). It is fabricated. It is placed in stock (handling). It is removed for shipment (handling). The productive function appears once; handling occurs four times! No progressive plant would continue expensive hand labor in a producing department if a machine could be found or designed to do the job more efficiently. Yet in their materials handling methods many establishments are 40 years behind the times.

The surveys and calculations leading to the acquisition or replacement of any major type of machinery, whether for productive or service purposes, are jobs for trained industrial engineers. There exists no handy rule of thumb by which management may infallibly appraise the relative efficiency of a present materials handling system as opposed to lift truck installation. Notwithstanding, the technical expert bases his investigations on two realistic points. First, will the proposed installation handle material at a lower cost per unit? Second, will the unit savings occur in sufficient volume, over an adequate period of time, to recover the difference in capital investment between the present and proposed systems?

Operators of small plants frequently hesitate to mechanize materials handling systems because they cannot envisage full use of the equipment. If productive machines suffer from periodic material starvation or if working areas are constantly cluttered with materials assembled as insurance against work stoppage, the introduction of modern handling methods may boost production noticeably.

A non-measurably but no less significant outgrowth from the installation of a modern materials handling system is the reduction of investment in raw materials. Under the limitations of obsolete systems a pipe line of materials running from the recovery docks to the machines must be kept full, in order to avoid work stoppages resulting from congestion. Rapid transit within the plant eliminates the necessity for excess stock-piling, thereby reducing inventory investment and freeing needed working capital.

Two storage battery-powered industrial tractors, both at least 25 years old, together with two fixed platform, battery-

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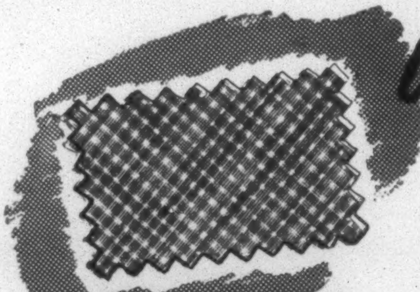
Cation-active Softener



FOR BRIGHTER SHADES
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ECONOMICAL

CATYLON is economical—only an exceedingly small quantity of this very efficient softening agent need be used.

CATYLON is permanent—repeated laundering or dry cleaning will not affect the original handle of the fabric or the rich, smooth softness of the finish.

CATYLON makes fabrics more "salable"—assures bright shades, clear print colors and uniform finish.

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based on research

The special attachment used on lift trucks by Magee Carpet Co. for loading freight cars is easily detachable. Here the Towmotor is shown in a routine handling operation in the plant. Incoming raw material is taken to the weighing platform, then to production or storage as desired.

powered trucks, each of 4,000 pounds capacity, and in service since the fall of 1944, are utilized by Nonquitt Mills of New Bedford, Mass., manufacturer of yarn and of gray goods, to handle material in the spinning room, and for general yard duty.

According to C. H. Ashley, superintendent of the mills, the two oldest trucks used in the spinning room, one to each shift, enables that room to maintain production. The trucks move trains of cars containing boxes of empty, or filled, bobbins along the rows of spinning machines. Here reels of various combinations of cotton and wool are spun into merino yarn which is used either in the manufacture of the gray goods, or is sold to knitters or weavers. The cones of yarn are packed in steel strapped cartons, each carton weighing on the average of 280 pounds. The gray goods are for the most part a wool and rayon combination.

Nonquitt Mills, erected some 40 years ago on the outskirts of New Bedford, began the use of battery-powered trucks in the handling of material in the spinning room back in 1911, acquiring a second truck in 1916 and a third in 1920. The oldest truck has since been retired, but the other two, as stated, are still in use. The two trucks used in the yard do not see the same amount of service as do the spinning room trucks, being used on the average of three days a week. These are used for the movement of cartons of various types of material or for bales of cotton or rayon, which eventually is spun into yarn.

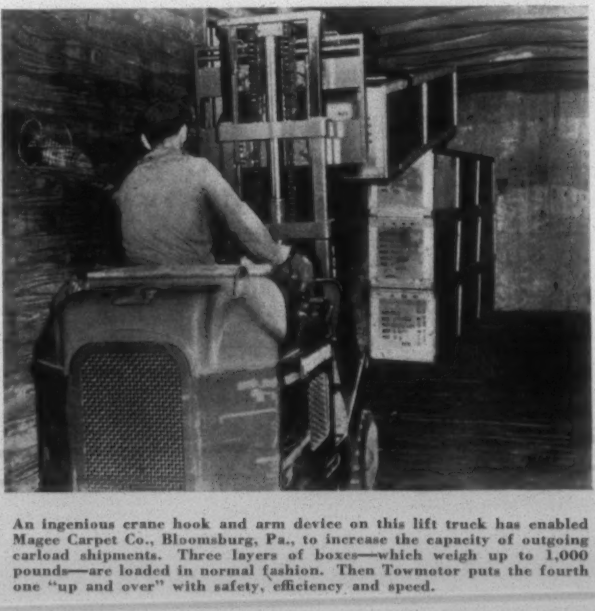
The yard trucks also occasionally are used to haul live skids loaded with material from place to place. During the fall of 1945 when the mill's machine shop was moved several hundred feet to another location, various lathes and other machine tools, mounted on wooden skids, were towed across the concrete yard of the mills several hundred feet and spotted in their new locations. In one instance the trucks also were used, with a block and fall, to hoist machinery from the courtyard of the mill to the third floor.

In operations in the spinning room, the battery-powered tractors operate in aisles between the rows of spinning frames, traveling back and forth a distance of about 325 feet in each aisle. The boxes containing the bobbins weigh about 30 pounds each, are stacked 12 to a car, and the little tractor pulls four to five cars at a time. The operator of the tractor is constantly discharging the cars of boxes. The boxes are partitioned one side holding the empty bobbins, the other the filled. As fast as the cars of boxes of empty bobbins are taken from the train, cars of boxes with filled bobbins are coupled on.

The mill makes use of one tractor for this work on each shift. The tractors are taken to the battery charging room at the end of each shift and run up to an automatic charging panel. This contains four charging stations. The tractor just taken off duty is spotted alongside the charger, while the other tractor, with freshly charged battery, is moved up to the spinning room on the third floor by elevator, after a run of several hundred feet from battery room to elevator. According to Earl Chase, chief electrician, all trucks are inspected, greased and given a careful check each week. The two spinning room tractors have been rebuilt once since they were acquired. Despite their age, Chase said, their upkeep is quite low.

From foremen and others in the mills it was learned that in the spinning room the tractor does work with one man that otherwise would keep approximately 16 men busy, this being the replenishment of the supply of empty bobbins, and the removal of the filled bobbins. Hand trucks, both four-wheeled live-skids and two-wheeled bale trucks are used in other sections of the plant in the movement of light loads. For the heavy loads, and the monotonous, repetitious operations in the yard and in the spinning room, reliance is placed on the storage battery-powered trucks, because they are always available and perform their tasks quickly and inexpensively, it was stated.

When the first buildings of Esmond Mills were erected some 40 years ago on the banks of the Woonasquatucket River, about six miles northwest of Providence, R. I., the product of the plant, a blanket of exceptional fineness, was moved through all the elements of conversion from cotton, then later from wool, or wool-and-cotton, to blanket and then into the shipping department on trucks that were pushed from place to place by hand. Then, when the mills were enlarged within a few years, it became necessary to mechanize the movement of material in some of the mills' operational departments and the first storage battery-powered trucks—a small one of the fixed platform type now long since retired—was placed in operation. Its task was to



An ingenious crane hook and arm device on this lift truck has enabled Magee Carpet Co., Bloomsburg, Pa., to increase the capacity of outgoing carload shipments. Three layers of boxes—which weigh up to 1,000 pounds—are loaded in normal fashion. Then Towmotor puts the fourth one "up and over" with safety, efficiency and speed.

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For a Quarter of a Century Burk-Schier Wet Processing Agents have met the test of chemical effectiveness by the quality of the textiles they have helped to produce.

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Yes . . . we are twenty five years young . . . and now as ever we at Burkart-Schier are constantly alert to the challenge of the industry's new needs . . . developing and perfecting Wet Processing Agents that help today's textiles do a better job.

We believe that our experience and knowledge in this field will enable us to be of greater service to the textile industry in the years ahead.

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MANUFACTURING CHEMISTS FOR THE TEXTILE INDUSTRY

move boxes of bobbins from the filling department into the weave room. This was 25 years ago.

In the summer of 1927 the entire Esmond warehousing system was rebuilt around two battery-powered, highlift-platform tiering trucks which had just been purchased. Today additional battery-powered trucks are being acquired by the company to be used in the production line flow of certain departments, and soon are to be placed in use. The purchase of the two 2,000-pound capacity platform trucks 20 years ago was for the purpose of facilitating storage of product. Engineers studied the capabilities of the trucks and recommended that triple-height tiering racks be installed to a height of some 15 feet in the warehouse space on the second floor of a new addition to the mill, in a space some 100 by 150 feet. Previously storage had been along purely horizontal lines. Now use was to be made of the vertical air rights within the warehousing area.

These racks, which ran the long way of the warehouse floor, were sectioned so that each section would accommodate one of the large standard-size containers in which blankets were packed. Each container, weighing about 400 pounds, had its own place in the tier, according to style, color and other designation of product. By use of the triple rack it was unnecessary to stack one container on top of another, and those on the bottom, or middle tiers could be removed without disturbing others in the same vertical row. One truck was assigned to this operation on the second floor, the operator, during an eight-hour shift, handling up to 125 cases, or some 50,000 pounds. Down on the ground floor the truck there not only moved the same number of cases to elevators for transport to the second floor but, in addition, unloaded and stacked about four tons of heavy cardboard cartons a day. These are the cartons in which the blankets are shipped, each blanket being individually boxed as well.

So long ago is it that battery-powered trucks began to supplant manual means in the handling, transport and warehousing in many parts of the mill, that comparison records no longer are available. That there was a substantial saving through use of the powered truck is evidenced by the fact that additional trucks of another type are now being installed, according to J. A. Jarbeau, production manager at the mill. "We are going to use battery-powered hand trucks," Mr. Jarbeau states, "in movement of material from wet finishing to the dye house. This now is carried in wheeled trucks, but these are too heavy to be pushed about all day by manual means. The movement of the compartment trucks in the filling department, in which boxes of filled bobbins are transported, also will be by means of this type of truck." Mr. Jarbeau says that mill engineers also were planning the unloading and moving to storage of bales of raw cotton. These are moved by hand trucks at present, but this work also is too great for all-manual handling, since the bales weigh in the neighborhood of 500 pounds each.

Storage battery-powered tractor truck in spinning room of Nonquitt Mills, New Bedford, Mass., hauls boxes of filled bobbins through rows of spinning frames. Mill foremen say this truck, with single operator, in replenishment of empty bobbins does work formerly requiring full services of 16 men. Truck is one of two serving this department.

One of two, fixed-platform heavy-duty storage battery-powered, industrial trucks used for yard and general duty at Nonquitt Mills, New Bedford, Mass. These trucks moved lathes and other machine tools several hundred feet across yard when mill's machine shop was relocated, and with block and fall, were used to hoist machinery from courtyard to third floor of mill.

An automatic charger is used, an extension cable running from the battery-charging room on the ground floor to the truck which is permanently used in the warehouse area on the second floor. The condition of the batteries is determined during the day by an ampere-hour meter. If found necessary because of extra heavy use during the morning, a booster charge is given at noon. Both trucks and batteries have proven to be low in upkeep, according to Mr. Jarbeau.

The length of the original platform of the highlift trucks was increased to a trifle more than six feet to accommodate the cases holding the blankets, an extra piece of metal being welded on to the original platform. The total height of lift is approximately 120 inches, and each truck is fitted with a remote control lever enabling the operator to ride the ascending platform to the tiering height, and also to lower the platform from the elevated position while on the platform.

As area devoted to manufacture increases and additional tons upon tons of raw materials are needed to supply machines turning out finished product, with a consequent greater need developing for storage area, manufacturers generally ask themselves: "How can raw materials plus finished product, thus be handled, safely, economically and expeditiously?" Bigelow-Sanford Carpet Co., Inc., which since 1825 has been producing carpets and floor coverings in its plant in Thompsonville, Conn., on the Connecticut River halfway between Springfield, Mass., and Hartford, Conn., found its answer to this problem of heavy-duty material movement and warehousing more than a quarter this beautiful lithograph

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IRREGULAR PAGINATION

An industrial truck does duty as a tractor in hauling this 18-foot roll of carpeting up a 13 per cent grade. Ramps save time and work for the freight elevator at Bigelow-Sanford Carpet Co.

of a century ago. It was in the storage battery-powered industrial truck.

A platform truck sufficed at first, but so efficient, as well as time and labor-saving, did this prove that additional platform trucks were acquired, then battery-powered tractors capable of pulling trains of heavily-laden trucks, and finally—to secure the full use of its air rights in its storaging areas—a fork-lift truck, of 4,000 pounds capacity and a 108-inch vertical lift, was added. Today, six battery-powered trucks are used at the Thompsonville plant—two tractors which operate from the finishing to the shipping room; a low-lift platform in the wool house and another in the service department; a fixed-platform truck used in shipping and for general transport of material, and the fork-lift truck which, to quote officials at the plant "operates all over," but which is used for tiering bales of wool, rayon, cotton and jute; for moving machinery—(and even small buildings as the occasion demands)—and for general storaging operations.

The principal tasks assigned to the trucks are in the handling of baled wool into the receiving department and for delivery to process; through operation to operation in some parts of process, and for the handling of finished carpet and yarn. The tendency is to overload these trucks, "by about 25 per cent," it is said, but despite this practice maintenance costs have not been high.

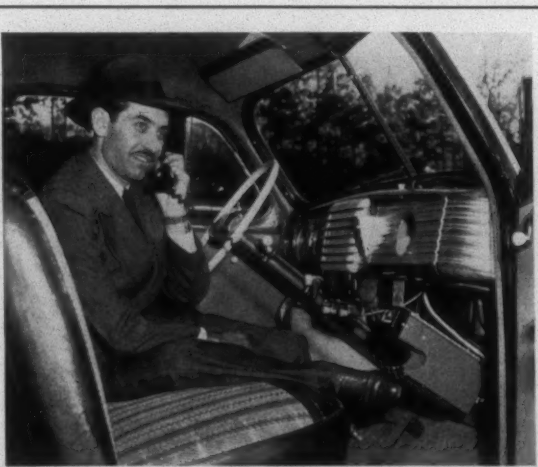
The first truck was placed in operation at the Bigelow-Sanford plant in 1920. This was a platform truck, as stated previously, and it still is in daily use. In addition to carrying loads on its platform this truck—upon occasion—also is used as a tractor to move trains of wheeled flats. In 1926 tractors were added, then additional platform trucks, with the fork-lift truck being acquired in 1937. No other battery-powered trucks have since been purchased. However, during the years when government orders had to be met and existing intra-plant transportation facilities proved insufficient to meet the demands, three additional trucks using another type of power were made accessible to the company which placed them in operation in yard work. These also are being made use of at present on certain types of transportation and yard duty between buildings, occasionally working on the same tasks as do the battery-powered trucks. Preference for the electric truck for heavy-duty work was expressed, however.

Because the bulk of the haulage operations must be kept within the plant buildings, ramps connect some of the adjacent buildings above ground level. The longest run in the plant is performed by a tractor, with a load in both directions. Trailer loads of finished carpet are transported from the Axminster finishing room over a route some 1,500 feet long to the final inspection department. There a train of yarn-filled trailers each with a load of 800 pounds is picked up for return to the setting room. On the return trip the tractor travels 225 feet of its route up a ten per cent grade.

Another operation performed by a low-lift platform truck is the transport of bales of wool—five in a load—from storage to the breakers, a distance of some 250 feet. The weight of a bale of wool ranges from 300 to 1,000 pounds. Floor to floor access, both intra and inter-building, is by elevator in most instances, and by ramp in one.

According to E. L. Ridley, plant engineer at the Bigelow-Sanford mill, a 50 per cent saving in labor was immediately noticeable with the installation of the first truck, and this ratio has been maintained with subsequent additions. In addition there has been a speeding up of material flow, both from raw material received by freight car or over-the-road truck, into preliminary storage, then into and along process flow, and from finished product into hold storage or into outward shipment.

The battery-powered trucks are in service some eight out of every ten hours of the day, with the measure of availability being the full ten hours. *(Continued on Page 66)*



Radiotelephone is the latest device for quick action by Troy Whitehead Machinery Co. of Charlotte. Making a call in the picture above is Salesman Andy Kowick, who works out of Atlanta, Ga. A call originating from the company's headquarters in Charlotte is handled over ordinary facilities to Atlanta, the nearest point having booster stations. The call is given to an operator handling radiotelephone, who sends the call over short wave. Mr. Kowick receives a red flash on his light signal and answers. The firm now is planning to cover all of its cars and trucks by radiotelephone, Sales Manager Ira S. Teat reports, in any section of the United States where this service is available.

Dyeing and Finishing

Finishers Hold 33rd Meeting

William Berry, president of the National Association of Finishers of Textile Fabrics and vice-president and general manager in charge of sales of Riegel Textile Corp., told the 33rd annual meeting of the group in New York City, Jan. 28, that he believes there will be a return to more nearly normal operations within a year. Competition will then re-enter the picture more aggressiely, he said, and profits will depend on good management. In this respect he urged accurate knowlege of costs and good labor relations based on mutual trust and understanding, as probably the two most important problems.

Mr. Berry revealed that despite the lack of publicity on the subject there exists today an "increased actual and potential capacity of considerable proportions" for finishing of textiles. He pointed out that although after World War II the finishing industry emerged with greatly increased capacity, little is being said about this situation today.

"While the number of new finishing plants which have been or are being built is relatively few, the potential capacity has been increased in other ways," he stated. "Many additions have been made to existing plants, the installation of the latest type of machinery, as well as the discovery of new methods of processing, such as continuous bleaching and dyeing, all speed up production and thereby enhance the available capacity."

Others officers of the group re-elected, in addition to Mr. Berry, are R. W. Arrington of Union Bleachery, Greenville, S. C., chairman of executive committee; G. D. Harrison of Lewiston (Me.) Bleachery & Dye Works, vice-president; A. G. Poor of Standard Bleachery & Printing Co., Carlton Hill, N. J., vice-president, and Alice C. Moore, association secretary-treasurer.

Members of the executive committee elected to serve for three-year terms, expiring January, 1950, are A. G. Odell, Kerr Bleachery & Finishing Works, Concord, N. C.; George Summersby, Bradford Dyeing Association, Westerly, R. I.; and B. I. Ward, Bellman Brook Bleachery Co., Fairview, N. J. Elected to serve for one-year terms, expiring January, 1948: R. W. Arrington, Union Bleachery, Greenville, S. C.; W. A. Broadfoot, Aspinook Corp., Jewett City, Conn.; H. M. Burke, Dutchess Bleachery, Inc., Wappingers Falls, N. Y.; J. M. Cole, Cold Spring Bleachery, Yardley, Pa.; J. B. Farrell, Defiance Bleachery, Barrowsville, Mass.; A. L. Garfinkel, Lowell Bleachery, Inc., St. Louis, Mo.; C. B. Hayes, Pacific Mills, Lyman, S. C.; A. O. Joslin, Rock Hill (S. C.) Printing & Finishing Co.; Lawrence Marx, Jr., Clearwater (S. C.) Mfg. Co.; W. F. Robertson, Jr., North Carolina Finishing Co., Salisbury, N. C.; W. H. Robertson, Robertson Bleachery & Dye Works, New Milford, Conn.; J. A. Simmons, Lanett Bleachery & Dye Works, West Point, Ga., and Richard Ward, Providence D. B. & C. Co., Providence, R. I.

In addition to the above, the following members of the executive committee continue to serve unexpired terms, as follows: term expiring January, 1948—S. M. Cone, Jr., Cone Finishing Co., Greensboro, N. C.; J. K. Milliken, Mount Hope Finishing Co., North Dighton, Mass., and W. O. Forssell, Slatersville (R. I.) Finishing Co. Mr. Forssell was nominated to fill the balance of the term of L. H. Ballou, Slatersville Finishing Co., whose term expires in January, 1948, and whose resignation was received under date of Dec. 2, 1946. Terms expiring January, 1949—W. R. MacIntyre, Jos. Bancroft & Sons Co., Wilmington, Del.; G. E. Sinkinson, Sayles Finishing Plants, Inc., Saylesville, R. I., and G. A. McClatchie, United States Finishing Co., Norwich, Conn.

DuPont's New Rain Tester

For the first time, a civilian program has been successfully carried through for evaluating the rain-resistance of water-repellent garments. A new laboratory method which accurately predicts the use performance of rainwear was described Jan. 31 by George A. Slowinske, head of sales service in the E. I. du Pont de Nemours & Co. fine chemicals division, during a meeting of the New York Section of the American Association of Textile Chemists and Colorists at Rochelle Park, N. J.

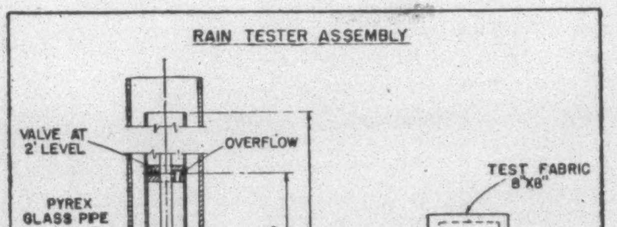
Reporting on a recently completed study of the relationships between the actual performance of treated cotton raincoats and results of five different laboratory water-penetration tests, Mr. Slowinske disclosed that the new Du Pont rain tester is the first instrument to give correlated data which can be translated into terms to describe the performance of rainwear under light rain, heavy rain, or a cloudburst. The study was made possible by the development during the war of a "rain room" at the Philadelphia Army Quartermaster Depot. Here 70 cotton raincoats made with combinations of twill, poplin, gabardine, sateen and oxford constructions, were tested under impact of water from a tower with nozzles placed at different heights. Single and double-thickness garments, worn by men in motion, were subjected to simulated rainfall of one inch and three inches per hour. Samples of fabrics going into the garments were tested by the rain tester and the Bundesmann, drop-penetration, A. A. T. C. C. hydrostatic pressure and A. A. T. C. C. impact penetration testers. The water-repellent treatments on the fabrics were evaluated by the A. A. T. C. C. immersion absorption test and the A. A. T. C. C. spray test. Treated fabrics were also subjected to air permeability, thickness, weight, and yarn count measurements.

The rain tester, developed in the Du Pont technical laboratory during work on durable water-repellent finishes for the Army and Navy, is markedly different from other instruments in measuring of different intensities of water impact. Variations are produced and controlled by a column of water which may be adjusted to heights of two to eight feet above the nozzle. The test fabric is cut eight inches square and a weighed paper blotter is placed behind it;

single or double-thickness of the same fabric or combinations of two or more fabrics may be tested.

The Bundesmann and drop-penetration testers employ water drops impinging on the test fabric with a single intensity and thus do not give an over-all picture of probable performance in actual wear. The hydrostatic pressure tester does not as accurately simulate the dynamic effects of rain. The impact penetration tester, while employing only a single intensity of water impact, is believed to be suitable for ruling out fabrics which are of limited value for water-repellent rainwear.

The importance of using only water-repellent materials in rainwear construction was observed during the "rain room" work. Mr. Slowinske mentioned that the use of absorbent thread or trimming fabrics lessens the protection afforded by the garment. All linings should be made water-repellent, he pointed out, because the resistance of the outer fabric is influenced by the repellency of the supporting surface. Doubling a fabric will markedly increase its performance, the speaker said, adding, however, that garment tests showed the value of considering the single-thickness properties of fabrics to be used in double-thickness rainwear. For example, the use of an inadequate outer shell will allow rain to pass through the first layer and into the pockets. The double-thickness garments tested in this work used two thicknesses only in the upper part and sleeves. In the case of garments thus constructed with the poorer fabrics, water which penetrated through the first layer at the upper back ran down the inner fabric and wet the wearer.



Laboratory tester for water-repellent fabrics, developed by E. I. du Pont de Nemours & Co., Inc., to forecast performance of rainwear in actual use.

It is believed that the results obtained from the study will aid in interpreting a laboratory test in terms of great value to manufacturers for building rainwear to meet full consumer acceptance. While the figures on rain tester penetration or drop-penetration tester reading are of little or no help to an individual contemplating the purchase of a water-repellent raincoat, he will know, said Mr. Slowinske, what is meant by a claim expressing probable performance in terms of resistance to light or heavy rain or a cloudburst. The new data are also expected to be of interest to groups engaged in the promulgation of commercial standards, such as the Federal Trade Commission, the National Bureau of Standards, the water-repellent fabrics group of the Textile Fabrics Association, the Mail Order Association of America, the American Standards Association, and the National Retail Dry Goods Association.

Resistance To Crushing

The finishing of textile fabrics has long been an art, and this is still largely so. Introduction of a process for producing crush resistant effects as part of the finishing operation marked one of the first moves of science into the field. The implications of this move are revolutionary. From it has emerged a new era—one in which a fabric's properties are no longer limited to those of its component fibers, but may be permanently modified to give a broad, new range of desirable finishes. The natural resiliency of wool and silk has always been the studied envy of manufacturers of cotton, and later, rayon fabrics. Resistance to mussing, to bagging, to loss of shape, and the retention of original attractiveness were highly desired. Above all, the permanency of these properties was absolutely essential. All are today obtainable by what is known as crush resistance.

Much is to be said for the work of the Tootal Broadhurst Lee Co. at Manchester, England, in its initial and continued research to develop satisfactory crush resistant finishes. Reduced to its simplest terms, the process consists of impregnating fabrics with aqueous solutions of suitable carbamide formaldehyde condensates; drying, and subsequently heat treating them to insolubilize the materials within the fabric itself. Originally introduced in England, the process was later brought to this country and offered to the textile finishing industry. The problems involved were of considerable magnitude—new types of processing equipment, proper selection of fabrics, manufacture of resins and new chemicals, and finally, practical control of what was then considered a precision chemical reaction. All these developments have come about during the last ten or 15 years. The progress has been gradual rather than spectacular. It has been wholesome and sound because of the co-operation of the finishing industry with the manufacturers of machinery and of chemicals and their technical staffs.

The textile industry needed a suitable resin to be used in crush proofing. This was a highly complex problem. The material must not only give the desired effect, but must be one which can be handled with the maximum of ease under practical plant conditions. Even after the product is made the battle is just begun. The precise amount of resin to be applied, the best procedure and formulation for maximum penetration of the resin into the fabric, the most efficient

Pontachrome* Yellow DF

As a shading element in browns and olives, "PONTACHROME" Yellow DF is especially suited for use on worsteds and woolens, bathing suit yarns, carpet stock, and upholstery fabrics . . . is also recommended for self-shades.

The rich gold shades of "PONTACHROME" Yellow DF possess good fastness to light, fulling, carbonizing with both aluminum chloride and sulfuric acid, perspiration, salt water, and dry cleaning. Readily soluble in the usual concentrations . . . penetrates well . . . can be used on rawstock, tops, yarns, and piece goods. It is also suitable for dyeing nylon by the top-chrome process. E. I. du Pont de Nemours & Co. (Inc.), Dyestuffs Division, Wilmington 98, Delaware.

Du Pont Dyestuffs

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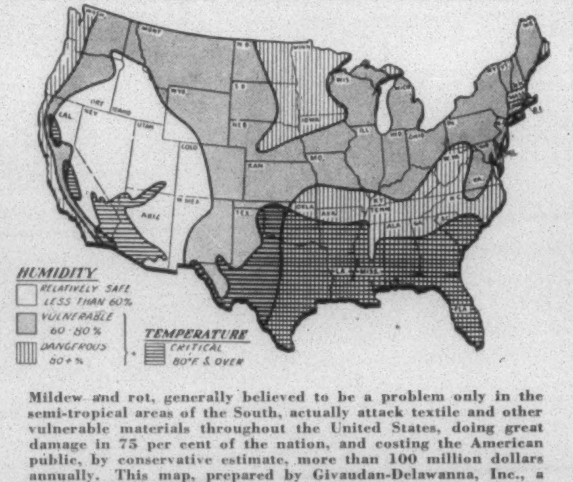
BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY* catalytic conditions of time, temperature and pH, first under laboratory conditions and then on a plant scale, have all been the object of intense research on the part of this company. Further, the resin must be stable during manufacture, storage, shipment and application, but must react quickly and completely at curing temperatures. This also holds true for the catalysts employed in the process. They must give the proper pH at time of curing, but must not react prematurely and destroy the water solubility of the condensation product.

In conjunction with the resins, synthetic surface active materials were needed to insure penetration so as to decrease the amount of surface resin and stiffness of hand. These materials in turn must not interfere with the effective condensation of the insolubilized material in the fabric. Likewise, lubricants to enhance the draping properties of the finished fabric were necessary to overcome harshness sometimes imparted by the resin. A new type of textile softener was developed for this purpose.

Generally, cellulose fabrics are most responsive to resin finishes. It is now accepted as truth that the treatment of spun rayon fabrics by modifications of the crush resistant process to overcome low wet strength, lack of body and inherent mussing qualities has been primarily responsible for their attaining their present-day prominence in the industry and their popularity with the customer. Of particular significance has been our work to obtain dimensional stability against shrinkage and stretch in laundering. The direct outcome of this work is the quantity production of fabrics which carry a guarantee against more than a small percentage of shrinkage or stretch after successive launderings.

From the original crush resistant finish, the permanent modification of fabrics during finishing has branched out to give almost as many fabrics again as there were fabrics originally. To mention but a few of these, the tropical summer suitings, the sportswear slack sets, the street dress—all are possible in an incomparable way thanks to this type of treatment. Linen-like cottons, crisp and dainty sheers can often attribute their attractiveness to resin treatments, while the high gloss of glazed chintz has been made durable in the same way. Above all, the effect is as lasting as the article made from the treated fabric. Work on this highly complex problem is by no means complete. With the advent of peace, consumer demand for the best fabric for any given purpose will serve as a stimulus for the whole textile industry. So we may feel sure that the treatment of fabrics with synthetic resins to obtain crush resistance, as well as other effects, will become a widely used and standard procedure.—*The Rohm & Haas Reporter.*



Mildew and rot, generally believed to be a problem only in the semi-tropical areas of the South, actually attack textile and other vulnerable materials throughout the United States, doing great damage in 75 per cent of the nation, and costing the American public, by conservative estimate, more than 100 million dollars annually. This map, prepared by Givaudan-Delawanna, Inc., a chemical firm which has done extensive mildew and mildew-proofing research, shows those areas of the United States which are vulnerable to attacks during an average July. It also helps explain the growing interest in fungicidal finishes among manufacturers. Humidity can range as low as 45° F. and still invite fungi destruction as long as the humidity is 75 per cent or more. The vertical lines on the map mark areas where the humidity exceeds 80 per cent (dangerous), the dotted areas where it ranges from 60 to 80 per cent (vulnerable), and the white areas where it is less than 60 per cent (relatively safe). The horizontal lines indicate the critical areas where high humidity combines with temperature exceeding 80° F.

Hand Block Printing

Application of color to fabrics by means of blocks of wood or stone appears to have been practiced at a very early age. Pliny (B. C. 40) describes a process employed in Egypt for coloring tissues whereby various mordants were impressed or brushed onto a fabric which was then immersed in a bath of dye. When the cloth was withdrawn from the bath, it was colored according to the various mordants applied.

The earliest example of a fabric printed from a carved wooden block is in the museum at Nara, Japan, and is dated 770 A.D. However, the origin of this method of printing on fabric is credited to the Chinese. Block printing of textiles was later introduced among the Mohammedan communities along the northern caravan routes from the East. Pigment dyes and various adhesives, such as gum arabic, were used by Mohammedan printers and, after the Crusades, by European artisans.

The rare and famous prints of the 13th and 14th centuries from Regensburg, Germany, were attempts to imitate, with carved wooden blocks, the precious gold brocades of the East. Blocks were used, not only with direct dyes, but with resists and mordants. France and eventually England developed the use of engraved copper plates, and in the year 1775 engraved copper rollers were adopted. The early methods of hand block printing in use in the French workshops provide an interesting comparison with present-day operations. The fabric, carefully soaked, was placed on a float, after which it was beaten with flails to remove foreign matter. Then it was passed on to the cylinder or mangle to smooth the surface sufficiently to carry the impression. This accomplished, the material was then transferred to a well-lighted printing room, where it was stretched out on a solid cloth-covered table, and the pattern applied by hand with a pigment-coated wooden block, on which the design had been cut in high relief. A stroke of the mallet drove the color into the material, and the worker, recoating the block from a color tray which an apprentice or tireur replenished from the color vat, continued the process until the entire length of the fabric had been printed. When a pattern in more than one color was desired, the outline of the design was printed in black or red by means of a first block, after which the fabric was passed to the fillers or secondary printers who, with new blocks, superimposed additional colors within the outlined pattern. After printing, the material was suspended on rollers to dry. After drying, the material was again soaked in running water to remove the mordant salts. Then followed the fixing of the color. After a further soaking and slow drying until it began to bleach,

Change to Paper Tube Spinning This New Low Cost Way

Get up to

40% MORE YARN PER BOBBIN

Illustration shows the larger warp package produced by paper-tube spinning on the Joanna Aluminum Spindle Adapter compared with the conventional package.

Get Ready Now for those Competitive Days Ahead—with Improved Spinning

WITH the New Joanna Aluminum Adapter, your spindles can be converted to paper-tube spinning—for either straight or tapered bobbins. The paper bobbins will be driven correctly—from the top. In warp spinning, you will get up to 40% more yarn per bobbin, cut your doffing and spooling costs, reduce ends down 50% per hour.

Your bobbins will be doffed every ten hours in many cases, instead of every six hours and twenty minutes for the old wooden type. Your saving in doffing and spooling alone will pay you 30% annually on your investment in converting with the new Joanna Adapter.

The cost of fitting the Joanna Adapter to your spindles, including complete assembly, grinding and finishing spindle blade acorn and whirl, usually does not exceed $1.50. The Adapter is being used now by Joanna Textile Mills, Goldville, S. C., and other leading mills. Send samples of your present spindles to us for quotation. We invite you to try the Joanna Adapter on one frame and compare the improved results.

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PRECISION TOOLS • PRODUCTION • AND ENGINEERING
(FORMERLY TRANSPORTATION EQUIPMENT CO.)

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the material was submitted to a bath of cow dung which cleaned and brightened the colors. Before the piece was ready for sale, it had yet to be stiffened with starch and beeswax and pressed to give it a luster similar to the Persian prints.—*Dyelines and Bylines,* American Cyanamid Co.

Third Quarter Dyeing and Finishing Drops

Total production of 2,014 million linear yards of cotton and rayon woven fabrics bleached, dyed, or printed and finished in the United States during the third quarter of 1946 was ten per cent less than in the second quarter, according to a report from the Bureau of the Census, and marked the first decrease in quarterly production of finished fabrics since the third quarter of 1945. Of the third quarter total yardage 81 per cent was cotton goods and 19 per cent rayon. The 1,625 million yards of cotton goods bleached, dyed, or printed and finished in the third quarter is a decrease of nine per cent from the previous quarter, but 14 per cent over the yardage processed in the July-September period of 1945. The largest percentage decrease reported was in printed and finished rayon fabrics, the total of which was 25 per cent less than the 103 million yards processed during the second quarter of 1946.

Statistics further revealed that bleached and finished cotton goods dropped 11 per cent under second quarter output. Cotton and rayon fabrics plain dyed and finished in the third quarter was six per cent less than in the second quarter of 1946 and three per cent more than in the third quarter of 1945. Cotton and rayon fabric printed and finished in the third quarter was off 15 per cent as compared to the previous quarter but was an increase of 48 per cent over the third quarter of 1945.

Russians Operating German Chemical Industry

Francis J. Curtis of St. Louis, vice-president of Monsanto Chemical Co., expressed belief last month that surviving chemical plants in eastern Germany, in themselves, give Russia's chemical industry a capacity approximately that of pre-war Germany. Testifying at Washington before an interdepartmental fact-finding panel in opposition to lowered tariff on certain chemical commodities, Mr. Curtis declared that Russia's "inherited" chemical plants pose a severe threat to American security.

He pointed out that I. G. Farben, comprising at least 75 per cent of Germany's technical industries, expanded its tonnage output during the war over 90 per cent, and continued: "Permanent war damage is not as great as many would like to suppose because relatively few of the larger plants were bombed and chemical process equipment was difficult to destroy."

Mr. Curtis, who immediately after V-E Day inspected many German chemical plants as a technical consultant for the Chemical Warfare Service, told of having visited mile-long installations in which not a single pane of glass was broken. He said more than 42 per cent of the Farben plant capacity at the war's end was in the Russian zone, with the balance of Germany's privately owned chemical industry similarly distributed. "Thus," he explained, "in addition to her own expanded industry, Russia had inherited large chemical plants which, because of geographical locations, suffered less from England-based heavy bombers than did those other zones."

Along with buildings and machinery and equipment, he testified, the Russians also captured German technical personnel with which to operate. He declared all these facts point to the conclusion that the Russians control a modern chemical industry in their zone approximately as large as German pre-war capacity. "State trading, slave labor, currency evaluation and other ruthless foreign trade practices are a threat of excessive and destructive imports in this country," Mr. Curtis warned.

He expressed the opinion that Russia's position in the world chemical economy has been further strengthened by its recently concluded trade agreements with satellite countries. "This will enable Russia to build a still larger domestic industry, excess production of which could be exported to this country under pricing dictated solely by financial and political expediency," Mr. Curtis predicted. "Actual production costs mean nothing to a totalitarian state," he declared.

Mr. Curtis emphasized that the organic chemistry industry supplies necessary materials to all major industries and is vital to the American economy. It must be thoroughly integrated, he said, in order to operate efficiently. The production of lower price foreign chemicals, he contended, will disrupt the balanced structure on which it rests. "Competition from the most skilled foreign producers is actual, not theoretical," said Mr. Curtis. "Our industries might be able to meet this competition on a fair trading basis but cannot hope to survive the inroads created by state trading, slave labor, artificial exchange rate and other unorthodox practices."

Dropping of Crown Tested Plan Explained

American Viscose Corp. announced Feb. 6 its intention to discontinue the Crown Tested Plan, which it has maintained since 1930 to encourage and assist in continual improvements in rayon fabric serviceability. The company's announcement states that: "The Crown Tested Plan has completed its job; and we are now discontinuing it. Many of the trade's leaders are now doing their own quality control, not for altruistic reasons, but because they believe it is good business. Now that a foundation has been laid, we are turning over the job of quality control to the textile producing and converting trades, to whom we believe this job rightly belongs."

The former Crown Tested Department will henceforth be known as the Converting Trade Relations Department. It will continue to render all possible service to the textile trade toward improving rayon fabric quality. It will also continue to maintain the manual of fabric performance requirements which has been so widely accepted by the trade. Another important part of its work will be to continue the research needed to keep these standards and test methods alive and up-to-date. In discontinuing the Crown Tested Plan, American Viscose Corp. states that it relinquishes none of its devotion to the ideal of rayon fabric quality. It believes that this ideal has been the strongest single factor in the growth and success of the rayon industry, and it will continue to do everything possible to encourage and assist the trade toward the achievement of this ideal.

An appropriation of $750,000 for a school of textile engineering at Georgia Tech would be provided under a measure recently introduced in the Georgia Legislature by Representatives J. L. Sibley Jennings and E. Culver Kidd.

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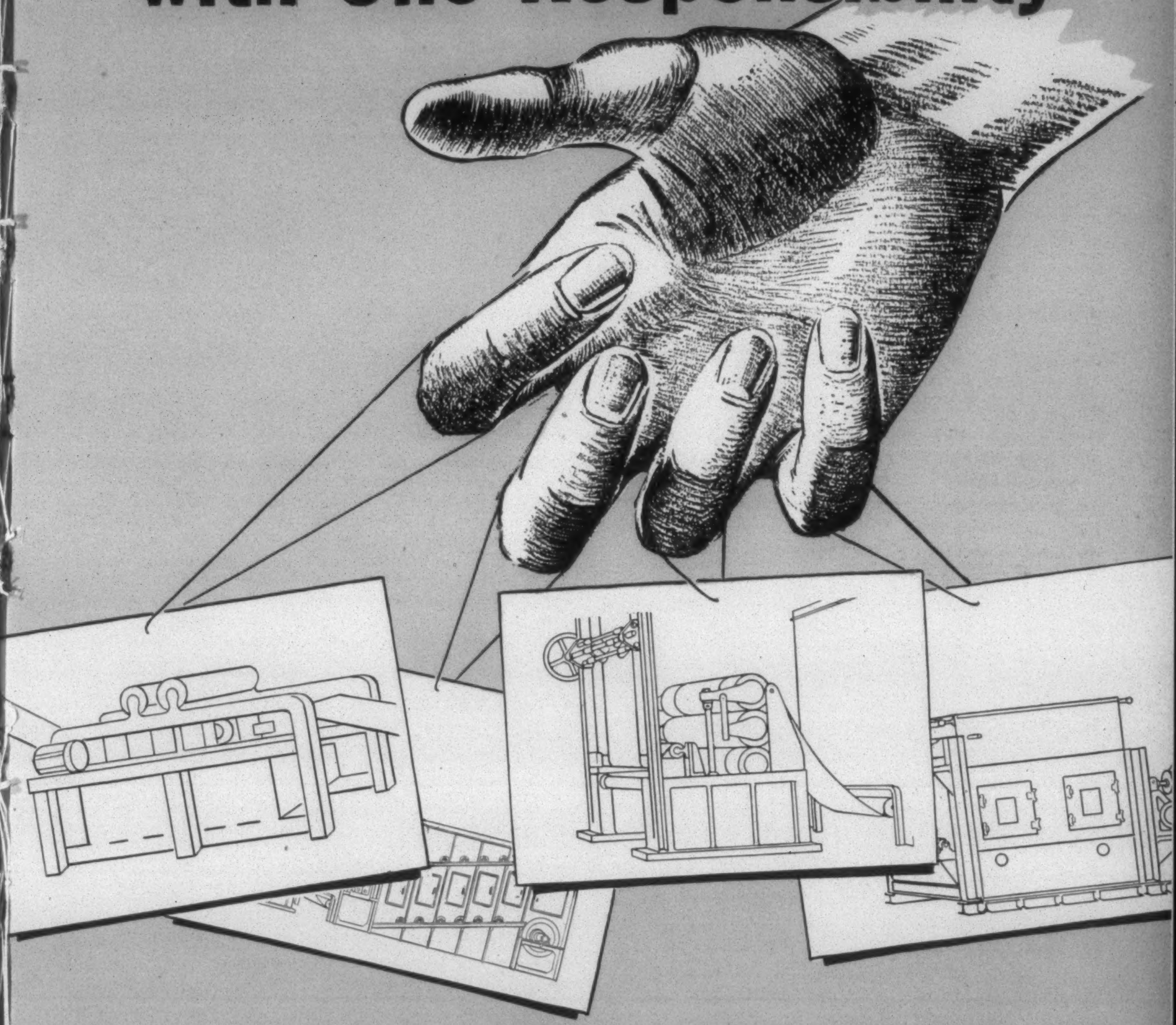

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The mill that is standardized on Butterworth equipment gets coordinated results plus undivided responsibility for all of their machines in the wet end of textile finishing. Production is up and costs are down *or Butterworth knows the reason why.*

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Right-to-Work Bill

Three members of the North Carolina Legislature who are G. I.'s from eastern North Carolina, none of them connected with industries or located in counties which have more than a few small industries, have recently introduced a bill which they call a "Right-to-Work Bill" but which the C. I. O. and A. F. of L. call an "Anti-Closed Shop Bill."

The introduction of the bill came as a surprise to most industrialists, but should be enacted, because if defeated it will be hailed as a victory for organized labor and as an approval of the principle of the closed shop.

Such a law was recently enacted in Virginia and we understand that similar laws have been introduced in the legislatures of South Carolina, Georgia, Alabama and Tennessee.

It will now be very unfortunate if such laws fail to pass and every person who is interested in maintaining the "right to work" should write or contact members of their state legislative bodies and urge that the "right" be protected by law.

Should these bills be defeated, the adjournment of the legislatures will be the signal for the C. I. O. and the A. F. of L. to proclaim that the closed shop is the will of the people of the several Southern states.

The refusal to permit a man to work and earn his living, unless he pays an inition fee and dues to any organization, whether it be the C. I. O. or the Methodist Church, is contrary to all known principles of liberty and such a policy should not exist under any democratic government.

The farmers of the South will not soon forget tactics of the unions during the periods when Army camps were being built in the South.

A union hut was usually erected before any other building was begun.

When a farmer applied for work he was sent to the union hut and had to pay an initiation fee of $25 to $75 and in some cases $100 before he was allowed to stick a spade in the ground or to drive a nail.

Thousands who refused to pay tribute were refused work at lucrative prices and returned to their farms.

It was often the case that where applicants exceeded the number of workers desired, the contractor, under orders from the union, discharged a number of workers and the union was thereby enabled to admit new members and collect additional initiation fees.

The contractors, knowing that they could pass on additional wages to the government and to the citizens of the United States, cared not what wages the unions demanded and the unions collected millions in initiation fees and dues.

The "right to work" at the construction of any Army camp simply did not exist unless the applicant paid exorbitant initiation fees to the C. I. O. or the A. F. of L., whichever was in charge.

Many Southern farmers will never forget the treatment they received and will rally to the support of a "right-to-work" law.

As an example of the denial of the right to work, the *New York Herald-Tribune* published the following story:

> Two brothers had built up a diary business in Connecticut and had an enviable clientele because of the high quality of their product. They built the business with their own hands, and they continued to work with their own hands as many an American who is not afraid of work still does.
>
> Then came the Teamsters Union to tell these brothers that they could no longer do any manual work at their own dairy, and, further, they must give all their drivers an increase of 50 per cent in pay.
>
> To the two brothers, this could mean nothing but bankruptcy. As they did not employ enough drivers to picket the dairy, the Teamsters Union sent in 250 outsiders to surround the place with a picket line.
>
> When old customers came to buy their milk, cash-and-carry, the pickets drove them off and slashed their automobile tires.
>
> The two brothers finally gave up the unequal fight. Their business was ruined, and they had no remedy at law, because the Teamsters Union is a law unto itself and is not responsible to any other authority.

The time has come to re-establish the basic principles of liberty and to enact such laws as will give the individual the "right to work."

If these pending measures are defeated the C. I. O. and the A. F. of L. will claim that the closed shop has been approved and will find enough judges to sustain that contention.

The Advance In Wages

Both manufacturers and labor unions know that the recent advance in wages was not justified by any advance in the cost of living and that the new scale cannot be maintained in normal times.

The union effort followed its usual pattern—that is, an advance was secured in New England where the textile mills are no longer able to resist any demand made by the unions which wrecked their industry and where specialties rather than sheeting and print cloths and other standard goods are made.

It is fully realized that there must be reductions in wages as soon as normal conditions return, because cotton goods cannot, except in unusual times, be manufactured and sold upon the basis of an 80-cent per hour minimum wage.

It is realized that when the reductions are made there will be strikes which will result in loss of wages to employees and loss of production to mills, but profits at that time, if any, will be small.

It has been thought best by many to yield to unjust demands now and take full advantage of the unusual conditions which prevail.

Textile employees should realize that they cannot expect present conditions in the industry to continue indefinitely and that when conditions become normal again there must be reductions in wages.

Memories are short but the older textile employees should remember those long periods of the past when the prices of textile goods were below cost of manufacture and when mills operated for many months, at a loss, solely for the purpose of giving employment, and a weekly pay envelope, to employees who otherwise would have been in distress.

We hope that the return of such days will be long delayed but they are certain to come again and then there will be memories of the enforced demands of the present day.

Denying Their Brothers

Advertisements signed by the CAROLINA DISTRICT, COMMUNIST PARTY, U. S. A., have recently appeared in the *Winston-Salem Journal and Sentinel* and the *Raleigh News and Observer*.

These advertisements demanded that the "Right-to-Work Bill" now before the North Carolina Legislature be defeated along with all union regulation bills now before Congress.

The advertisements of the COMMUNIST PARTY aroused such resentment among legislators that William Smith and other C. I. O. leaders have been making a great effort to disclaim any affiliation with Communists, in spite of the general knowledge that there are definite connections.

In a recent statement, William Green, president of the American Federation of Labor, said:

> The C. I. O. is "foreign dominated" by a group of communists who shape the organization's policies.

Last July Bernard Hiatt, district president of the C. I. O. Furniture Workers, with headquarters at Thomasville, N. C., resigned with the statement that he could no longer work under the communistic domination of the C. I. O.

His resignation came two days after Morris Muster of New York City had quit his post as U. F. W. A. international president, charging that "communists have captured the union."

Addressing his resignation to Ernest Marsh, U. F. W. A. director of organization, with headquarters in New York, Mr. Hiatt said:

> Since Morris Muster resigned as president this leaves the international union completely dominated by communists and their lieutenants. The people of the South and myself want no part of your communist union.

The C. I. O. is definitely affiliated with the communists in the United States and Russia and the statements made by William Smith are made solely to avoid the resentment against the Communist Party advertisements which have recently appeared.

If the tenets of the communists and the C. I. O. are placed in parallel columns and studied it will be found that they differ in very few if any details. They are blood brothers.

Taxes Paid by North Carolina Textile Industry

ESTIMATES OF STATE AND LOCAL TAXES PAID IN NORTH CAROLINA
BY TEXTILE INDUSTRY FOR FISCAL YEAR 1945-46 (See note)
(Compiled by North Carolina Department of Revenue)
(Includes Knitting, Finishing and Garment Manufacture)

Taxpayer Group and Type of Tax	State Taxes	Local Taxes	Total State and Local
Domestic Textile Corporations:			
Income Tax	$ 5,709,128	$	$ 5,709,128
Franchise Tax	720,163		720,163
Intangibles Tax	85,354	219,480	304,834
Sales Tax	150,000		150,000
Local Property		2,435,890	2,435,890
Total Domestic Corporations	$ 6,664,645	$ 2,655,370	$ 9,320,015
Foreign Textile Corporations:			
Income Tax	$ 1,320,780	$	$ 1,320,780
Franchise Tax	131,646		131,646
Intangibles Tax	12,051	30,988	43,039
Sales Tax	30,000		30,000
Local Property		414,463	414,463
Total Foreign Corporations	$ 1,494,477	$ 445,451	$ 1,939,928
Total Corporations	$ 8,159,122	$ 3,100,821	$11,259,943
Individual Owners and Officials:			
Income Tax	$ 1,464,236	$	$ 1,464,236
Property Taxes, etc.	30,000	582,970	612,970
Sales Tax	150,000		150,000
Total for Group	$ 1,644,236	$ 582,970	$ 2,227,206
Individual Employees:			
Income Tax	$ 544,472	$	$ 544,472
Property Taxes, etc.		1,086,072	1,086,072
Sales Tax	3,100,000		3,100,000
Total for Group	$ 3,644,472	$ 1,086,072	$ 4,730,544
Total for Individuals	$ 5,288,708	$ 1,669,042	$ 6,957,750
Total Corporations and Individuals	$13,447,830	$ 4,769,863	$18,217,693

Note: Amounts for corporate income and franchise taxes are actual tabulations. Individual income tax is based on tabulations of prior year. Other taxes are estimated from data on tax returns, and census data for earlier years. No estimates are included for gasoline, motor vehicle, beverage, or miscellaneous license or other taxes.

Fire Insurance Rates

The table below shows the North Carolina fire insurance records for a ten-year period.

They show the net premiums received and net losses incurred for fire insurance companies. Such data was taken from the biennial reports of the North Carolina Department of Insurance for a ten-year period from 1936 to and including 1945, and respects only those companies licensed to do business in North Carolina for the periods of time indicated.

	Net Premiums Received	Net Losses Incurred
1936	$ 9,162,812	$ 3,686,660
1937	9,682,267	2,669,298
1938	9,920,998	3,259,396
1939	10,569,163	3,842,397
1940	10,555,015	5,437,837
1941	8,842,312	3,724,597
1942	12,524,085	4,716,090
1943	13,865,780	5,920,024
1944	14,784,993	5,487,024
1945	15,673,648	6,096,490
TOTAL	$115,581,072	$44,839,813

We have reason to believe that while the above figures are for North Carolina that approximately the same records exist for other Southern states.

Industries and citizens of North Carolina and other Southern states are entitled to fire insurance premiums based upon record fire losses and it does seem to us that the excess is too great.

MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

GAFFNEY, S. C.—Alleging that principal stockholders and officers of Musgrove Mills, Gaffney, and the mill's selling agents, Wilson and Bradbury, Inc., New York City, charged and paid commission rates "grossly in excess of the value of the services rendered" and "regardless of whether Musgrove Mills was operated at a profit or loss," three Greenville, S. C., stockholders have asked the circuit court for a financial accounting by the controlling interests. Among the plaintiffs' charges was that "for six years immediately preceding the filing of the suit, the overcharges made by Wilson and Bradbury . . . and paid by said Musgrove Mills . . . amounted to over $100,000, exclusive of interest." The mills are capitalized at $728,000 and have more than 15,000 spindles.

BURLINGTON, N. C.—The Banner and Leader Warehouse property here has been purchased by Burlington Mills Corp., Greensboro, N. C., for the sum of $100,000.

CLARKSVILLE, VA.—Colonial Mills, Inc., a New York corporation with principal Virginia office here, has been granted authority to manufacture textiles. The maximum capital is $3,750,000.

HICKORY, N. C.—Hickory Cordage Co. has been granted a permit for the building of a storage warehouse on Sweetwater Road, at a cost of $15,000.

HONEA PATH, S. C.—Chiquola Mfg. Co., Honea Path, has named Hesslein & Co., Inc., New York City, as its selling agent. Chiquola manufactures print cloths, operating 116 cards, 1,414 narrow looms and 51,008 ring spindles.

QUITMAN, GA.—Controlling interest in Morgan Cotton Mills of Georgia, Inc., Quitman, has been acquired by Alexander Smith & Sons Carpet Co., Yonkers, N. Y. No change is contemplated in management of the mills, which in recent years have supplied a substantial portion of the cotton yarns used by the carpet company.

LINCOLNTON, N. C.—Glenn Mills, Inc., Lincolnton, has been incorporated to deal in fabrics, with authorized capital of $1,000,000. Incorporators are W. W. Glenn, Dan M. Boyd and Susan L. Glenn, all of Lincolnton.

LOWLAND, TENN.—Construction of a $20,000,000 rayon yarn plant here by American Enka Corp., Enka, N. C., is under way. The new plant will be known as the No. 2 unit of the corporation. Plans call for completion of the plant in time for fall production.

ANDERSON, S. C.—Lonsdale Co., New York City, has been named sales agent for the Gossett Dyeing and Finishing Plant of Textron Southern, Inc., Anderson.

PELZER, S. C.—Perfect attendance records achieved by 149 employees of the Pelzer Plant of Kendall Co., including 26 who have not missed a day from work in four years, were recognized at a turkey dinner given by the management for the employees recently. Buttons, in token of their achievement, also were given them.

CHARLOTTESVILLE, VA.—Two years of operation without a lost-time accident were celebrated at a dinner given for superintendents and foremen of Frank Ix & Sons, Inc., Charlottesville, and its affiliated company, Franklin Fabrix, Inc., Elizabethton, Tenn. Awards in recognition of 3,008,304 man-hours of accident-free operation by the Ix employees and 216,144 man-hours by those of Franklin Fabrix were presented by Liberty Mutual Insurance Co.

BURLINGTON, N. C.—Stevens Mfg. Co., located on Elmire Street, and Seaboard Mills, Inc., located in the old Carolina Mills plant in Hopedale community near Burlington, have been acquired by United States Rubber Co. The Stevens mill is equipped with 72 looms and the Seaboard plant with 134. R. M. Mitchell, formerly assistant to President and Treasurer Paul Stevens, will be in charge of operations for U. S. Rubber. F. C. Phillips continues as general superintendent.

Profit of $18,508,910 Reported By Stevens

J. P. Stevens & Co., Inc., in its first printed financial statement to stockholders since consolidation was completed last Sept. 1, reported a net profit after taxes of $18,508,910, on a pro forma basis, for the ten-month fiscal period ended Oct. 31, 1946. The company, which has integrated many mills throughout the country, reported actual earnings of $4,150,362 for the two-month period of September and October, or $1.20 per share.

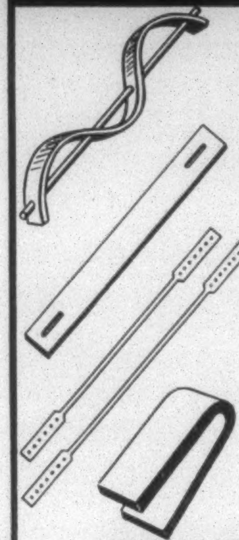
The report showed a gross profit for the ten months of $42,230,775 on total current assets of $99,336,835, and net profit before taxes of $32,190,264. The report also brought out that on Sept. 1 the ocmpany was committed to plant expansion and improvement programs calling for a total expenditure of approximately $13,000,000. On these projects, $1,727,345 was expended during the two-month period to Oct. 31. However, new commitments and increases in cost on old projects brought the sum still to be expended to approximately $12,000,000.

Textron Common Stock Pays $6

Consolidated net earnings after taxes of Textron, Inc., for the year ended Dec. 28, 1946, should exceed $6 a share on the 1,010,932 shares of common stock outstanding, after provisions for dividends on the preferred stock and after eliminating minority interests in earnings of subsidiaries prior to acquisition of their stock, Royal Little, president, has stated in a letter to stockholders. This represents a revision upward in earnings estimates. On Dec. 18, 1946, consolidated net earnings for 1946 were estimated at better than $5 a share on the outstanding common shares. In 1945 the company reported a net loss of $147,338.

Consolidated sales of the entire Textron system for the fourth quarter of 1946 after eliminating inter-company sales were approximately $40,000,000 and for the full year 1946 they will exceed $110,000,000, Mr. Little announced Feb. 11. "The excellent consolidated earnings of Textron, Inc.," Mr. Little states, "and a conservative dividend policy have made it possible with other available funds to reduce the outstanding bank loans, including those of Textron Southern, Inc., from approximately $17,000,000 at Sept. 1, 1946, to $7,000,000 at the year end.

PAGE
TEXTILE
LEATHERS



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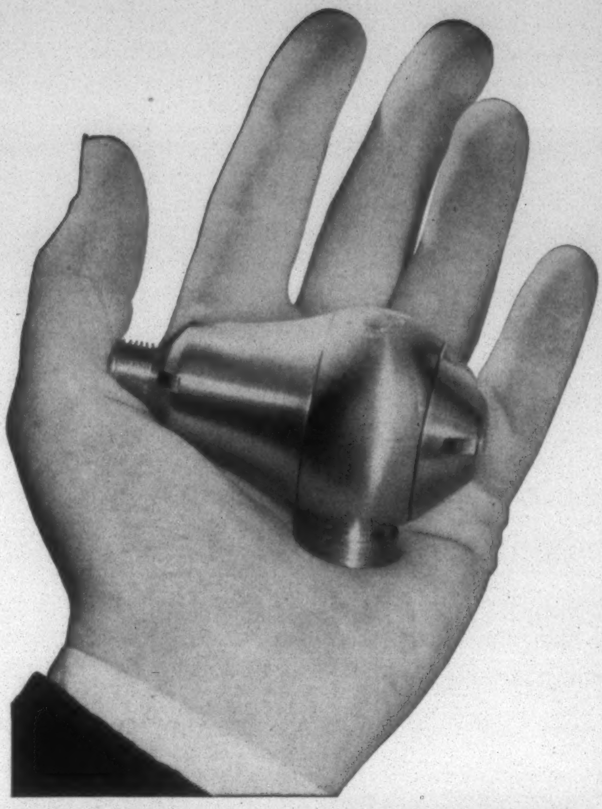

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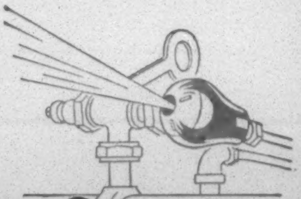

Parks-Cramer Company

Fitchburg, Mass. Boston, Mass. Charlotte, N. C.

Promotions, Resignations, Elections, Transfers, Appointments, Honors, Notes on Men in Uniform, Civic and Associational Activity

PERSONAL NEWS

C. V. Hudgens has resigned as overseer of spinning at Hart Cotton Mills, Inc., Tarboro, N. C., and has accepted a similar position at Highland Park Mfg. Co., Rock Hill, S. C.

W. H. Spencer, Jr., formerly overseer of weaving at Monarch Mills, Lockhart, S. C., has become assistant superintendent of the No. 4 weave mill of Dan River Mills, Schoolfield, Va.

John Cocker, III, and D. L. Friday have been elected to the board of directors of Cocker Machine & Foundry Co., Gastonia, N. C. New officers of the firm are Mrs. Mary L. Cocker, president and treasurer; A. G. Myers, first vice-president; John Cocker, III, second vice-president; D. L. Friday, secretary and general manager; J. C. Bodansky, assistant treasurer; Katherine Payne, assistant secretary.

Joseph LeMay, left, has been appointed general manager of the Atwood Division of Farrel-Birmingham Co., Inc., Ansonia, Conn. Located at Stonington, Conn., the Atwood Division manufactures textile machinery. Mr. LeMay replaces William M. Fraser, resigned. The new general manager has held various positions during his long association with Farrel-Birmingham. . . . William L. Paulhamous has been appointed sales manager of the Atwood Division.

Wallace Ayres, for 45 years identified with Dan River Mills, Inc., Danville, Va., will retire as secretary of the company March 1.

Fred M. Lyon has resigned as secretary of Micolas Cotton Mills, Opp, Ala., retaining the office of treasurer. J. E. Cheatham, Jr., succeeds him as secretary.

Bennett Rose has been named vice-president in charge of mill relations for Iselin-Jefferson Co. Mr. Rose, formerly assistant general manager of the Victor-Monaghan Division of J. P. Stevens & Co. at Greenville, S. C., will continue to live in Greenville and from that point will make contacts with mills in the Iselin-Jefferson group, advising on engineering and manufacturing problems in rayons and cottons.

D. C. Turrentine, Jr., formerly superintendent of the Greer, S. C., plant of Victor-Monoghan Co., has succeeded Bennett Rose as assistant general manager of the company, with headquarters at Greenville, S. C. H. P. Glenn, former superintendent of preparation for Dunean Mills, Greenville, succeeds Mr. Turrentine at Greer.

John A. Simmons, vice-president and general manager of Lanett (Ala.) Bleachery and Dye Works, recently was honored by fellow employees in recognition of 30 years of service with the company. Mr. Simmons was presented a silver bowl. An oxygen tent also was presented on the occasion, to be placed in honor of Mr. Simmons in the Langdale (Ala.) Hospital.

Marse Grant, assistant personnel director and housing manager at Firestone Textiles, Inc., Gastonia, N. C., has resigned that position.

R. L. Huffines, Jr., was elected a vice-president of Burlington Mills Corp., Greensboro, N. C., at a recent meeting of the board of directors. Douglas M. Orr was named an assistant secretary, and William S. Coulter was elected a vice-president and general counsel. . . . In other changes, C. Eugene Rowe was elevated to controller general from controller; R. N. Stokes was promoted to controller from assistant controller, and Stephen L. Upson was moved up to secretary from assistant secretary. All other Burlington officers were re-elected.

W. T. Draper, formerly overseer of No. 8 inspection room, Dan River Mills, Inc., Danville, Va., is now overseer of the cloth room at Jackson Mill No. 2, Wellford, S. C.

G. B. Heath, Sr., has been elected president of Manetta Mills, with plants at Lando, S. C., and Monroe, N. C. W. S. Simpson of Richburg, S. C., was elected general manager and secretary-treasurer of the Lando plant. R. A. Willis, Jr., of Monroe was elected general manager and secretary-treasurer of the Monroe plant. Elected Manetta directors were M. L. Heath, W. O. Nisbet, R. A. Willis, Sr., R. A. Willis, Jr., G. B. Heath, Sr., and Harry B. Heath.

Donald R. Jonas has been elected vice-president and treasurer of Johnston Mills, Inc., Charlotte, N. C., succeeding the late James S. Wilcox. Mr. Jonas also has been elected vice-president of Spinners Processing Co., Spindale, N. C., another Johnston interest. . . . John D. Stratford of Charlotte has been elected secretary-treasurer of Worth Spinning Co., Stony Point, N. C., also a Johnston unit.

Woodrow W. Lambeth, formerly associated with the Fieldcrest Mills division of Marshall Field & Co., Inc., Spray, N. C., as superintendent of the Fieldale, Va., towel plant, has been appointed general superintendent and assistant manager of Virginia Mills, Inc., Swepsonville, N. C. He also will serve as assistant to Walter M. Williams, executive vice-president of Virginia Mills. . . . Two other changes in the official staff of Virginia Mills includes the appointment of John W. Eagle as superintendent of the cotton division and Clarence R. Decker as superintendent of the rayon division.

James T. Hunter has been elected president of James Hunter Machine Co., North Adams, Mass. Richard A. Hunter, son of the new president, was elected vice-president. Carl W. Kemp was elected treasurer.

Robert W. Philip, for the past three years president of Callaway Institute, Inc., LaGrange, Ga., has been elected vice-president and director of research of Callaway Mills, LaGrange. Prior to joining Callaway Institute in January, 1944, Mr. Philip had for 25 years been connected with the W. R. C. Smith Publishing Co., Atlanta, Ga., first as associate editor and, subsequent to 1928, editor-in-chief of *Cotton* (now *Textile Industries*) and since 1938, vice-president. He will continue as president of Callaway Institute. . . . R. E. McTigue, former personnel director, has been made general superintendent of the Unity Spinning and Oakleaf Plants of Callaway. Jesse G. Maddox has been named superintendent of Unity, and Phillip Cleaveland has been named superintendent of Oakleaf. O. H. Halman, former purchasing agent for the Callaway U. S. E. O. division, has been named personnel director, succeeding Mr. McTigue. Roy Mann has joined the U. S. E. O. division as purchasing agent. B. P. Albright, former superintendent of Unity Spinning and Oakleaf plants, has accepted a position with American Processing Co., Mount Holly, N. C.

George O. Linberg of Newtonville, Mass., left, veteran of the New England textile chemical sales field, has been appointed sales manager of Monsanto Chemical Co.'s textile chemical department. He will direct textile chemical sales under a national textile products expansion program involving several million dollars in new plants and facilities. Mr. Linberg will assist Dr. Donald H. Powers, director of the department, and work in conjunction with Nate L. Crabtree, promotion manager, and Sawyer Sylvester, head of the department's technical develops. . . . Miss Haydon Ross has been appointed Monsanto's fashion co-ordinator with headquarters in New York City. She will work with designers and manufacturers in the promotion of fabrics processed with Mon-

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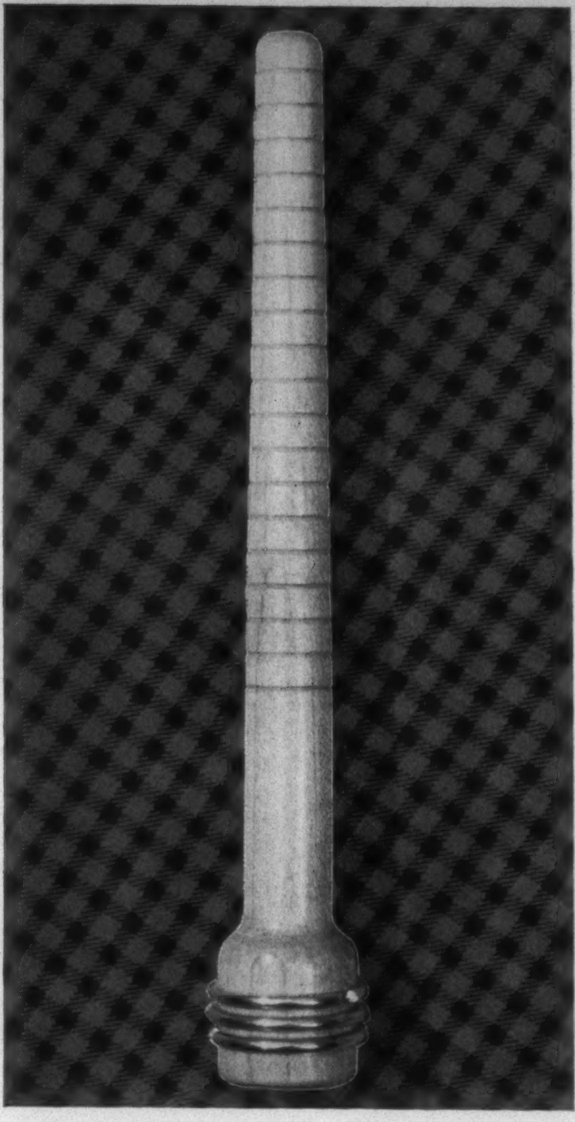

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South Carolina—Henry H. Hersey, Norwood Place, Greenville, S. C.

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santo's new textile chemicals. . . . F. B. Langreck has been named technical advisor and J. M. Graham, Jr., and W. Kenneth Menke, assistant directors, of Monsanto's general development department.

L. M. Howell and G. A. Willson have resigned their respective positions with Barber-Colman Co. and have formed the firm of Howell-Willson Co. to offer engineering maintenance service to mills using automatic spoolers and warpers. Headquarters of the company are located at 217 East Earle Street, Greenville, S. C.

The resignation of Cliff Slusser as vice-president in charge of production and as a member of the board of directors, has been announced by Goodyear Tire & Rubber Co. He will continue with the company as vice-president and general manager of the subsidiaries which operate Goodyear's domestic textile plants and coal mines. Mr. Slusser is succeeded on the board of directors and as vice-president in charge of production by Russell DeYoung, who has been vice-president and general manager of Goodyear Aircraft Corp., a subsidiary. Fred W. Climer was elected to a new vice-presidency of the parent company in charge of industrial relations. He moves up from the position of assistant to the president where he has had charge of personnel and labor relations.

H. G. Stone has been elected a vice-president and renamed works manager by Tennessee Eastman Corp., Kingsport. The board of directors also has announced the following appointments: R. L. White, treasurer; B. M. Brown, S. E. Palmer, H. L. Ford and R. L. Churchill, assistant vice-presidents; R. S. Leonard, comptroller; F. M. Kelly, assistant secretary; R. L. Flanary and W. C. Hale, assistant comptrollers; A. H. Robinson, M. C. Hargrave and R. T. Hardin, assistant treasurers.

Van B. Taunton, formerly foreman of the finishing department of Lanett (Ala.) Bleachery and Dye Works, has been named head of personnel and public relations.

Dr. John H. Blomquist has been promoted to the position of research supervisor in the nylon section of the rayon technical division of E. I. du Pont de Nemours & Co., Wilmington, Del. . . . Other organizational changes in the staff of Du Pont's technical division include the promotion of Dr. F. H. Swezey, director of the acetate research section, Wilmington, to a senior research associate at the acetate process rayon plant, Waynesboro, Va.; Dr. G. P. Hoff, director of nylon research, to director of acetate research; Dr. G. M. Karns, director of engineering research, to director of cellophane research; Dr. W. W. Heckert, assistant director of nylon research, to director; Dr. E. W. Spanagel, manager of nylon research, to assistant director of cellophane research at Buffalo; W. C. Eberlin, manager of engineering research, Wilmington, to assistant director of new fibers research, Waynesboro; Dr. R. A. A. Hentschel, supervisor of engineering research at Buffalo, to manager of pioneering research there; Dr. F. R. Millhiser, supervisor of viscose rayon research at the Spruance Plant, Richmond, Va., to manager; and Hood Worthington, assistant director of engineering research, to assistant director of nylon research, Wilmington. . . . Managerial changes in research groups include the transfers of R. H. Stafford from the engineering research section to viscose rayon research section at the Spruance Plant; C. E. Coleman from engineering research section to cellophane research section at the Yerkes Plant; Dr. W. W. Watkins from manager of pioneering research to Waynesboro as manager of cellulose acetate research; and W. E. Neff from the engineering research section to supervisor of cellophane research section; of J. P. Sinclair from engineering research to new fibers research and Dr. W. E. Larsen from acetate research to new fibers research, at Waynesboro; and of D. R. Hull from engineering research to nylon research at Wilmington.

E. D. Horton has resigned as superintendent of the cotton department of Judson Mills, Greenville, S. C., to become superintendent of Hartsville (S. C.) Cotton Mills.

John H. W. Snead, associated with the Lowell, Mass., plants of Textron, Inc., for the past five years, most recently as works manager for Textron's home fashions group, will fill an important Southern assignment for Textron following an extended vacation in Mexico. . . . H. W. Stewart has been named director of purchases for Textron. During the war he was connected with the textile division of the War Production Board in Washington, D. C. . . . Carl F. Horten, assistant controller of Nashua (N. H.) Mfg. Co., a subsidiary of Textron, has been appointed controller of Textron Southern, Inc. He will be succeeded in the Nashua position by W. H. Dobbins.

Joseph F. Merton, formerly with Burlington Mills Corp. and Verney Fabrics, has joined Greenwood Mills, Inc., where he will be engaged in quality control in the rayon department.

Frederick M. FitzGerald, superintendent of the foundry at Draper Corp., Hopedale, Mass., has been named to the board of directors. Also named a Draper director was Phillips Ketchum.

The late Stuart W. Cramer, pioneer textile executive, will be memorialized with the provision for a social room in the proposed activities building at Sacred Heart College, Belmont, N. C. Providing funds for this purpose are Mrs. Stuart W. Cramer, Sr., George W. Cramer of Cramerton, N. C., and Stuart W. Cramer, Jr., of Charlotte.

Robert T. Stevens, chairman of the board of J. P. Stevens & Co., Inc., New York City, has been appointed one of four vice-chairmen of the 1947 Business Advisory Council of the Department of Commerce.

F. D. Hand, deputy comptroller of Pepperell Mfg. Co., Lindale, Ga., and office manager of the Lindale Division of Pepperell, has been awarded the Silver Beaver, highest award of the Boy Scouts of America, by the Northwest Georgia Council of Boy Scouts.

Dr. William McGehee, formerly head of the department of psychology at N. C. State College, has joined Fieldcrest Mills, Spray, N. C., a division of Marshall Field & Co., Inc., as director of personnel research. He is conducting investigations in the fields of selection, training, job evaluation and industrial relations problems.

Arthur B. Edge, Jr., president of Callaway Mills, LaGrange, Ga., has assumed his duties as a new state director of the National Association of Manufacturers. He also is president of the Georgia Manufacturers Association.

Otis Brumbelow, who is connected with the offices of the Aragon (Ga.) Mills, a division of A. D. Juilliard Co., has been elected vice-chairman of the Rockmart, Ga., chapter of the American Red Cross.

J. A. Mooney, general superintendent, has been made resident manager of the South Charleston, S. C., plant of Westvaco Chlorine Products Corp. M. H. Norton succeeds Mr. Mooney as general superintendent.

William Brown, assistant superintendent of the Shawmut (Ala.) Mill of West Point Mfg. Co., has been awarded a service key as the Chattahoochee Valley Junior Chamber of Commerce's "Young Man of the Year."

Robert S. Berry, Jr., released recently from the U. S. Army as a captain after 19 months in the Aleutian Islands, has been appointed assistant on production control to J. F. Nicholl, manager of the decorative fabrics department of the Lumite Division, Chicopee Mfg. Corp., New York City.

W. B. Minter, manager of Arnall Mfg. Co., has been elected president of the Elberton (Ga.) Chamber of Commerce for 1947.

M. Earl Heard, vice-president in charge of research for West Point (Ga.) Mfg. Co., has been named to the board of directors of Monarch Knitting Co., Ltd., Toronto, Canada.

B. W. Whorton, superintendent of Dixie Cotton Mills, has been appointed as a member of the LaGrange (Ga.) City Board of Education.

OBITUARY

W. Harrison Hightower of Thomaston, Ga., president of Thomaston Cotton Mills, died Feb. 9 in Atlanta, Ga. Mr. Hightower was a director of the Cotton-Textile Institute of New York, the American Cotton Manufacturers Association, the Cotton Manufacturers of Georgia and of the Institute of Textile Technology, Charlottesville, Va. He is survived by his wife, two sons and a daughter.

O. Max Gardner, 64, United States ambassador to the Court of St. James, former Undersecretary of the Treasury, former Governor of North Carolina and onetime owner of extensive textile mill properties, died Feb. 6 in New York City on the eve of his departure for England. He is survived by his wife, Fay Lamar Gardner; one daughter, Mrs. N. E. Burgess; and three sons, James, Ralph and O. Max Gardner, Jr. Funeral services for Mr. Gardner were conducted Feb. 8 at First Baptist Church, Shelby, N. C., with interment there. A champion of the North Carolina Textile

Foundation, Mr. Gardner's counsel was widely sought by textile interests and his law firm, Gardner, Morrison & Rogers, in Washington, D. C., represented a number of corporations as well as leading trade associations in the industry. Formerly president of Cleveland Cloth Mills, Shelby, Mr. Gardner remained a member of the organization until his death. He was a director of Burgess Fabrics Corp., New York City, a rayon converting organization.

Charles F. Marble, 81, treasurer of Curtis & Marble Co., died Feb. 7 at Worcester, Mass., after a long illness. He had been associated with the company for 60 years. Survivors include his widow, a son, a daughter, a brother and two grandchildren.

Dr. Harold DeWitt Smith, vice-president and treasurer of A. M. Tenney Associates, Inc., and former president of the Textile Research Institute, died suddenly while on vacation in Mexico City. He is survived by his wife, Helen Tichenor Smith. Dr. Smith, who held the degree of Ph. D. in chemistry from the University of Berlin, was in charge of the Synthetic Fiber Research Group which worker closely during the war with Brig.-Gen. Georges Doriot of the Office of the Quartermaster General. He was an honorary life member of the Textile Institute of Manchester, England.

Dr. Clarence L. Dorman, 43, director of the agricultural experiment station at Mississippi State College, died of a heart attack Feb. 8 at State College, Miss. He was a leader in setting up the Flannagan-Hope Bill for agricultural research and had just returned from Washington after a week of work on details of project.

Emanuel Frohman, 58, founder of Precision Gear & Machine Co., Charlotte, N. C., died Feb. 9 at Miami, Fla., where he had lived since retiring from active business in 1943. He is survived by his wife and a son, Harry Frohman.

Robert A. Macfarlan, 54, manager of the E. I. du Pont de Nemours & Co. finishes plant at Parlin, N. J., died Feb. 12 at New Brunswick, N. J. He is survived by his wife and three sons. His brother, E. J. Macfarlan of the fabrics and finishes department of Du Pont at Wilmington, Del., also survives. A native of Columbia, S. C., Mr. Macfarlan was graduated with the degree of bachelor of science in civil engineering at the University of South Carolina. He joined Du Pont in 1912.

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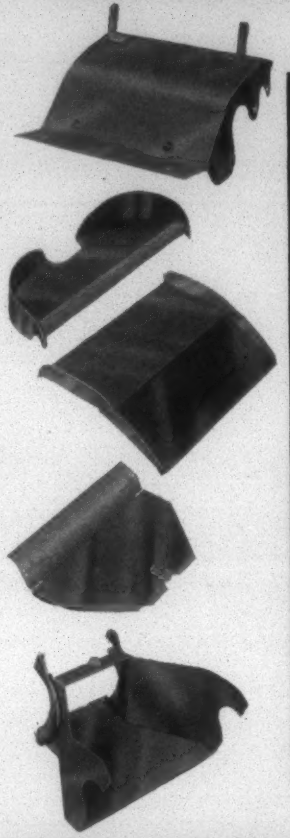

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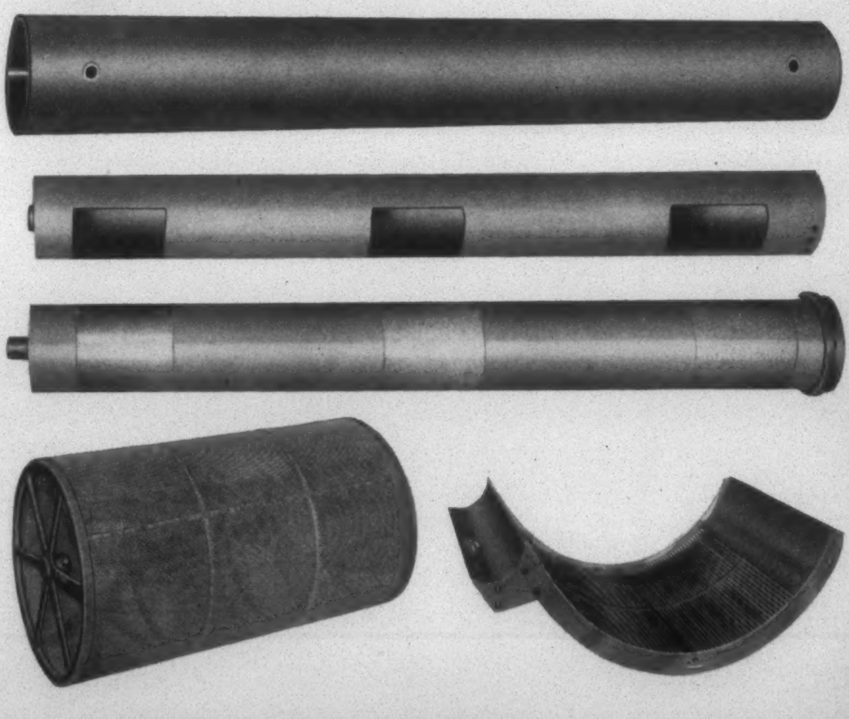

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EQUIPMENT — SUPPLIES — LITERATURE

Folder On Wool Dyeing Furnished By Dexter

Another folder in the series of technical service data which is supplied to those interested in particular processing problems has been issued by the textile chemical division of Dexter Chemical Corp., New York City. This folder is concerned with the problem of the level dyeing of wool and the deterioration of the handle and strength of the stock resulting from the removal of the natural grease content. It presents, in this connection, Maxitol No. 10 and its use as a protective agent and dyeing oil. This highly sulfated oil not only promotes level dyeing of wool and assists in penetration but also protects the fibers both in dyeing and bleaching and in after use. The data sheets bound in this folder include the customary information regarding the properties and reaction of Maxitol No. 10, its uses, the formulae for its various uses and the chemical methods for its analysis. Textile plant executives interested in this particular problem may obtain a copy of this folder by writing Dexter Chemical Corp. (Textile Chemical Division), 819 Edgewater Road, New York 59, N. Y.

New Waste Unit Offered By Carolina Machinery Co.

Carolina Machinery Co. of Charlotte, N. C., has designed and is now manufacturing a new waste machine, built in one to five beaters. The beaters are 30 inches in diameter with ball bearings and can be adjusted according to the staple of the waste. The machine is compactly designed to require a minimum of floor space. Carolina Machinery Co. also is distributor for Salisbury enclosed blending feeders, and other textile machinery and supplies. Principles of the company are C. P. Smith and J. R. Pangle. Mr. Smith has been selling textile machinery for the past ten years and prior to that time held an executive position with Phenix Mills, Kings Mountain, N. C. Mr. Pangle has designed textile machines since 1932. He was formerly connected with the Hamilton Machinery Co. and later with the Troy Whitehead Machinery Co. of Charlotte.

Land in Charge of New Marshall and Williams Plant

Marshall and Williams Corp. of Providence, R. I., has opened a new plant at 121 Welborn Street, Greenville, S. C., with Fred H. Land, left, in charge of repairing and servicing tenter frames and chains. The fully equipped and modern plant will operate as Marshall and Williams Southern Corp. The establishment of this plant enables the company to spread its work load between Greenville and Providence, as well as offer quicker service to customers throughout the textile industry. Mr. Land will be sales as well as works manager.

NUMO Spinning Control Is Described In Folder

The NUMO automatic spinning control, designed for the purpose of eliminating uneven yarn packages and "tails," is described in a folder published by the manufacturer, Ernest F. Culbreath Co. of Charlotte, N. C. The unit consists of one or two valves (depending on type of bobbin build), one or two cylinders (depending on type of drive), and tubing for connecting up valves and cylinders. The main valve is adjusted to trip when bobbins are filled to desired package size. This valve, when tripped, releases flow of

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air to cylinder, piston of which is attached to traverse rod and in turn bears rail down. The speed at which rail comes down is controlled with speed control valve, adjusted for desired speed. As the rail comes down, it trips stop switch which is adjusted to stop frame at a point which gives desired tail. Among the claims advanced by the manufacturer are the following: the control eliminates the necessity of doffers bearing rail down manually; eliminates uneven packages from doff to doff; eliminates uneven tails left at butt of bobbins; reduces number of ends down on doff.

Ten New Circulars Offered By General Dyestuff Corp.

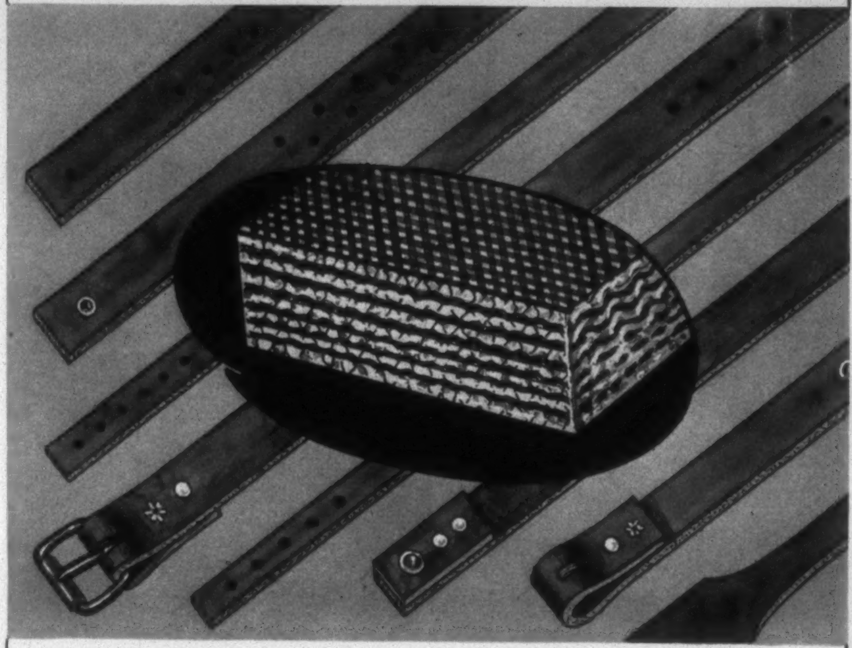
General Dyestuff Corp. of New York City recently released ten new circulars for the industry as follows: G-446, *Fast Scarlet Salt RN;* G-350-1, *Emulphor AG Oil Soluble;* G-448, *Emulphor E L A;* G-458; *Katigen Tan K;* G-463, *Indanthrene Printing Brown RD Paste Fine;* G-454, *Soromine B S A;* G-459, *Soromine F W Paste;* G-460, *Prestabit Oil V New;* G-466, *Nuva B;* and GDC-269, *Colloresine HV, MV, LV.*

Color Booklet Points Way To Increased Efficiency

How scientific use of the energy in color is currently employed in the nation's plants and factories to increase over-all efficiency is shown graphically in a new full-color, 32-page booklet published by the Pittsburgh Plate Glass Co. With facts and figures, plus numerous views of actual use of color in manufacturing and process plants, the booklet demonstrates how industrial officials, by following the principles of color dynamics, can (1) promote continuity of employment, (2) improve efficiency of operation, and (3) maintain quality of production. It reveals how dynamic colors will bring about more and better work per man-hour and more man-hours per man by making the employees' working environment cheerful and safe.

In a special section the booklet outlines the scientific facts about color. "The medical profession," it states, "has long realized that colors can be used to stimulate or depress. Some colors help people relax and be cheerful. Others stimulate and invigorate them. Still others set up irritation and actual physical discomfort." Individual sec-

Compare



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tions are devoted to the use of color on machinery and equipment; on walls and ceilings; and on floors, aisles, and mobile equipment with emphasis on color for safety. Each section is illustrated with full-color applications. A special section contains simplified and practical material specifications for industrial painting. Copies of the booklet may be had, free of charge, from Dept. NIB, Public Relations Department, Pittsburgh Plate Glass Co., 632 Duquesne Way, Pittsburgh 22, Pa.

Lewis-Shepard Lift Truck Is Described In Booklet

Lewis-Shepard Products, Inc., 325 Walnut Street, Watertown, Mass., has issued an eight-page illustrated booklet describing its new electric lift truck, the Power JackLift. Outstanding features of this truck, it is stated, are its 100 per cent electric drive, electric lift and electric brake. The truck can be operated with the handle vertical and in every other position and be maneuvered with utmost efficiency in congested areas and in less floor space, it is claimed. The brake acts instantaneously with release of handle triggers. The platform model of the Power JackLift is available in several platform widths and lengths and in 4,000 and 6,000-pound capacities. The pallet model is available in several fork lengths and in 4,000-pound capacity.

Foxboro's New Dynalog Electronic Controller

Among the features added since the war to the Foxboro line of instruments for measurement and control is the new Dynalog electronic recording pyrometer. It has no galvanometer, no slide wire, no dry cell, and requires no standardizing. Because of the instrument's continuous balancing action, the recording pen can traverse the full width of the chart in one second's time. Sensitivity is 1/10 of one per cent of the full scale range. For applications of temperature measurement, Dynalog instruments are available with ranges between minus 200° F. and plus 2,800° F., and for use with thermocouples or electric resistance bulbs. Recorders and recording controllers are offered. A giant indicating scale, for long-distance reading, is an optional additional feature. In addition to temperature applications, they are also in use for the measurement or control of humidity, force, strain, pH, speed and many other process variables. Dynalog instruments are illustrated and described in Bulletin 397 of Foxboro (Mass.) Co. Copies will be sent on request.

Baird Associates Develop New Forced Draft Dryer

A firm of industrial physicists, Baird Associates of Cambridge, Mass., has announced the development of a new type fiber dryer for moisture determinations. Unlike conventional oven type dryers, heated, filtered air is forced through the sample under test. Moisture is removed in a matter of minutes instead of hours even when the sample contains 60 per cent moisture and is as large as 400 grams. Temperature is controlled to 2° C. and may be set anywhere within a range of 80° C. to 240° C. Four individual drying chambers (see illustration) permit simultaneous drying of four samples, or eight samples if double containers are used;

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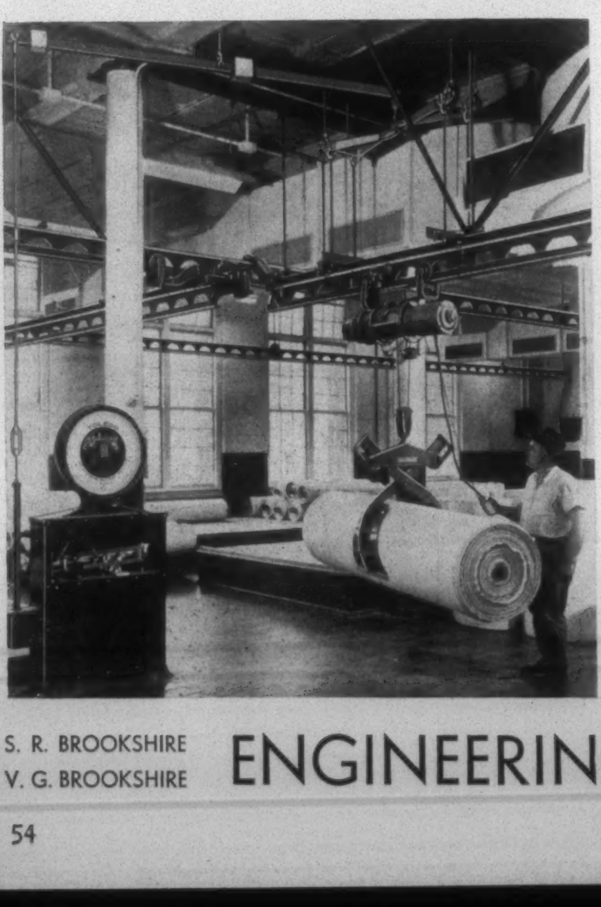

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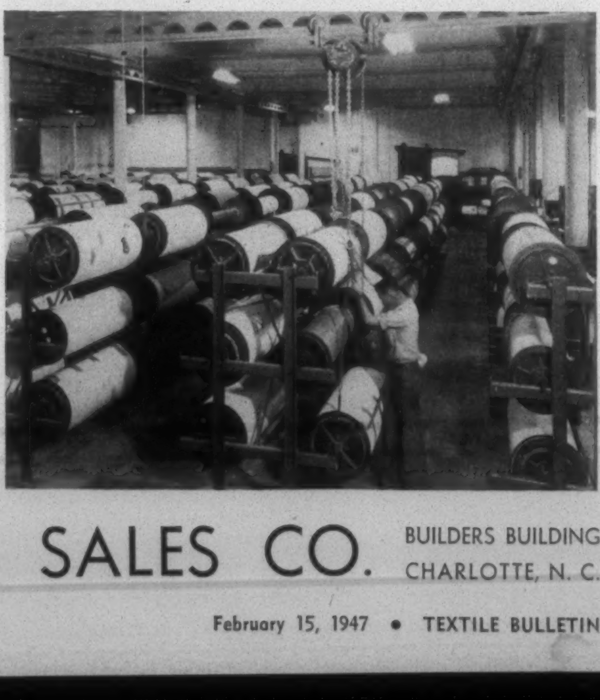
Left—Cloth rolls handled on interlocking Cranes and weighed quickly on track scales

Below—Selective beam storage with Tramrail Crane



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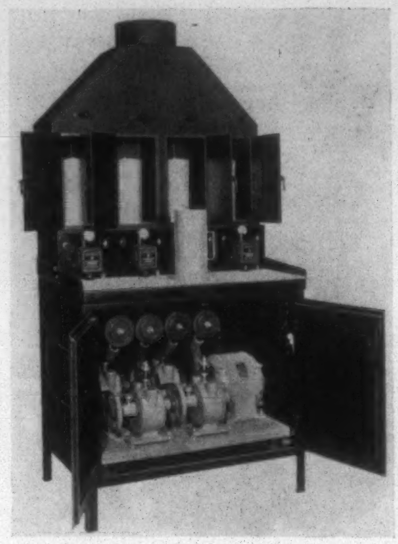
rotary pumps force 13 cubic feet of air per minute through the specimen being dried. A vent at the top of the apparatus exhausts the moisture laden air.



Any good laboratory scale measuring to 1/10 of a gram is satisfactory for weighing the wool before and after drying. Aluminum containers with perforated bases for holding the samples are supplied with the unit. Containers are available in 5¼-inch high and 10½-inch sizes. Covers are provided for capping both ends of the container if the laboratory wishes to allow the wool to cool before final weighing. The apparatus is a completely self-contained unit and is made to operate on 220-volt, A. C. 60-cycle, three-phase current The substantial metal cabinet is attractively finished in baked gray enamel with chromium trim. Additional details are available from the manufacturer. Ask for bulletin No. XXIV.

Universal Winding Co. Reports Its Earnings

Universal Winding Co. of Providence, R. I., manufacturer of textile winding machinery, reports that unaudited figures show net earnings after taxes of $356,312 or $1.24 per share for the period from July 1, 1946, to Jan. 11, 1947, equivalent to an annual rate of $2.30 per share. During a comparable period from July 1, 1945, to Jan. 12, 1946, net earnings after taxes were $51,432 or $.18 per share. A dividend of $.20 per common share was payable Feb. 1, 1947, to stockholders of record of Jan. 10, 1947. Net sales for the recent period were announced as $3,794,990, comparing with $2,230,602 for the same period the previous year. It was also stated that unfilled orders are larger than at the middle of last year and that production, despite material shortages and delays in delivery of materials, has reached levels close to the $10,000,000 goal set up at the start of the fiscal year. Construction work now in progress will make it possible to locate 80 per cent of the production machinery on a one-floor layout, providing major efficiencies in manufacturing by the middle of the summer.

Transparent Storage Tanks Of Lucite Are Developed

In order to solve a difficult liquid storage problem, transparent storage tanks of Lucite acrylic resin have been developed recently by engineers of Sto-Cant Engineering Co. of Maywood, Cal., for use by a Los Angeles firm. The tanks are used to store a chlorine bleaching solution and replace tanks of concrete lined with a conventional sealing solution. Average life of the concrete tanks had been found to be approximately six months. The plastic tanks are expected to last indefinitely since the Du Pont Lucite resists the chemicals in the solution and repair of the plastic material is relatively simple and inexpensive. Measuring 36 inches in diameter and five feet in length, the tanks are constructed of ¼-inch sheet Lucite. Reinforcements consist of strips of Lucite along the circumferential and longitudinal seams.

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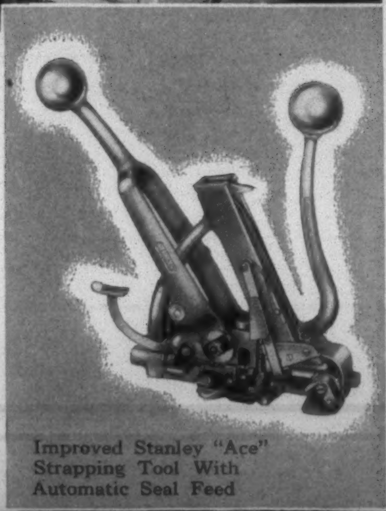

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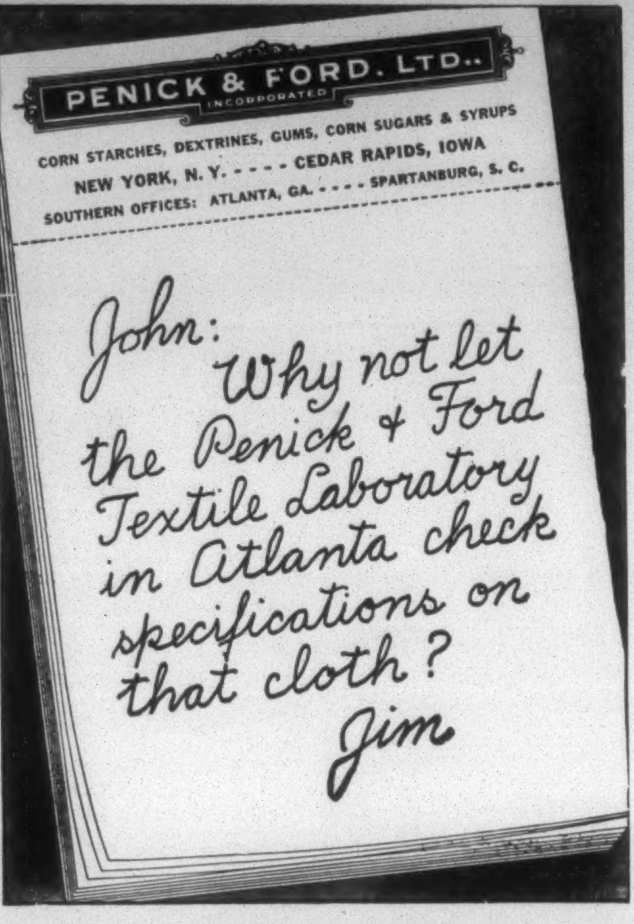
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Rayon Production in 1946 Reached New High

Rayon production in the United States reached a new high during 1946, according to the annual review of the industry contained in the February *Rayon Organon*, statistical publication of the Textile Economics Bureau, Inc. The output of rayon yarn and staple totaled 853,900,000 pounds, an increase of 7½ per cent over the preceding year. The 1946 production of filament yarn was 8½ per cent above 1945, and double that of 1939. Rayon staple output was five per cent over 1945 and more than double the 1940 figure. Statistical compilation of rayon production is exclusive of the non-cellulose synthetic fibers such as nylon, vinyon, casein, and protein fibers and spun glass for textile uses. It is estimated that the aggregate 1946 production of these non-cellulose base products would add between 35,000,000 and 40,000,000 pounds more to the year's synthetic fiber output.

Despite the tight raw material situation which prevailed during 1946 and the depressive effect of labor disturbances within and without the industry, all divisions of the industry contributed to the record performance, the *Organon* points out. Production of viscose-cupra yarn rose 9½ per cent during the year, acetate yarn 6½ per cent, viscose staple 2½ per cent, and acetate staple 11 per cent. On a poundage basis, the greatest increase was shown in the viscose-cupra yarn division, and the smallest gain in viscose staple.

World rayon production in 1946, on the basis of incomplete returns, totaled 1,800,000,000 pounds, an increase of 18 per cent over the preceding year, but still 37 per cent under the record output of 1941 when 2,835,000,000 pounds were produced. In the 1946 world total estimate, filament yarn comprised 1,100,000,000 pounds and staple 700,000,000 pounds. Among the foreign producers, outstanding gains were made by Belgium, Czechoslovakia, France, Great Britain, Italy and the Netherlands. Rayon production in Germany and Austria, however, remained at low levels, and in Japan, where at one time the greatest poundage in the world was realized, the output was nominal. Imports of rayon yarn into the United States during the first 11 months of 1946 totaled 105,219 pounds at an average value of $1.27 per pound. Although insignificant in relation to domestic rayon production, these imports were larger than any year since 1939. Imports of staple in the first 11 months of 1946 totaled 29,533,191 pounds, an amount exceeded only in 1939 when imports reached more than 47,000,000 pounds. Total exports of rayon yarn in

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the first 11 months of 1946 amounted to 14,915,568 pounds with principal export markets being Mexico, Canada and Cuba. Producers' exports of rayon yarn in 1946 were 38 per cent under 1946; of these exports, 77 per cent represented textile-type yarns, the remainder being tire types. Export of staple plus waste aggregated 4,133,989 pounds in the 11-month period, over 50 per cent of which went to Mexico.

During 1946 the pattern of rayon distribution reflected a return to peacetime operations, unencumbered by government orders which had channeled rayon yarn to manufacturers formerly using silk and nylon and for export and military requirements. Compared to 1945, shipments of rayon yarn to trades other than tire manufacturing showed the following changes: full-fashioned hosiery, minus 74 per cent; seamless hosiery, plus 34 per cent; circular knitting, plus 16 per cent; warp knitting, plus 23 per cent; broad woven fabrics, plus 13½ per cent; narrow woven, minus seven per cent; and miscellaneous uses plus six per cent. On a poundage basis the greatest gain was made in broad woven fabrics and the greatest loss in full-fashioned hosiery. Broad woven fabrics accounted for 75 per cent of all yarn shipped to the non-tire trades in 1946. Also of interest, the *Organon* points out, is the growth of rayon shipments to the warp knitting trade which includes tricot knitting. Shipments to that trade were 122 per cent above those in 1940, and last year warp knitters replaced circular knitters as the largest rayon consuming segment of the knitting industry. Tire manufacturers received 14 per cent more rayon yarn in 1946 than in the preceding year, and shipments to tire manufacturers last year accounted for 32 per cent of total domestic yarn shipments.

Reviewing rayon yarn production by denier and tenacity, the *Organon* reveals that the average denier of high tenacity viscose yarn production during 1946 increased to 1,290 as compared to 1,085 in 1945. In contrast, the average denier of both intermediate and regular tenacity viscose-cupra yarn output remained the same in 1946 as in 1945 at 129 denier.

Although acetate filament yarn averaged 96 denier during the year, slightly lower than the average of the preceding year, there were several significant shifts. An increase was recorded in the output of 50, 75 and 150 denier yarns and a decline in 100, 120 and 200-and-coarser denier acetate filament yarns. The average denier of total yarn shipments to the non-tire trades during the year showed no change, but yarn shipped to the full-fashioned hosiery trades averaged a finer denier, while that shipped to the seamless hosiery, warp and circular knitting trades and for

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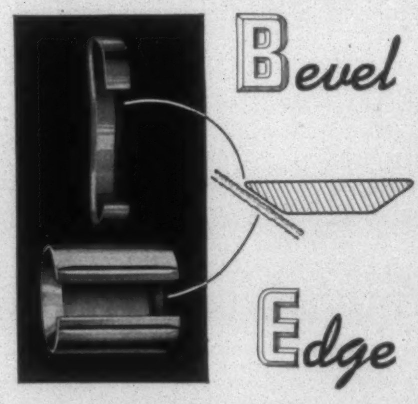

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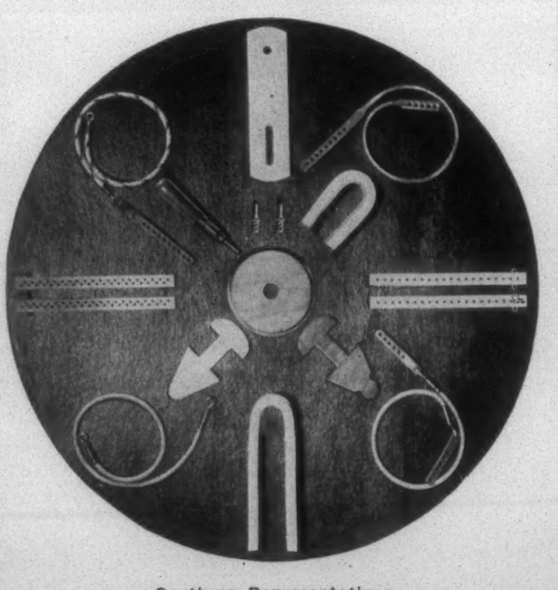

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miscellaneous uses were heavier. Average denier of yarns shipped to the tire trade was similar to the average production denier and showed an increase from 1,084 in 1945 to 1,284 in 1946. The increase in average denier for yarns shipped to the tire trade reflected the trend toward the 1,650 denier type yarns for tires. Average denier of yarn exported by producers also declined in 1946 as a result of a reduction in the volume of tire yarn exports.

Shipments of non-tire yarns to the New England territory have declined gradually but steadily percentagewise in the six year period between 1940 and 1946. Shipments to the Piedmont territory, on the other hand, have increased in the last six years, and it now receives 43 per cent of the total non-tire rayon yarn shipments, six per cent more than in 1940. Shipments to the New England territory reflect a six per cent loss, with the territory receiving 23 per cent of the total, as against 29 per cent in 1940. The metropolitan area receives 13 per cent of the total non-tire shipments, a percentage that has remained constant since 1942. Shipments to the Southern territory have increased since 1940 but the total volume remains small. Likewise shipments to the Midwest and West are small and last year were about the same as the 1940 level after an increase during the war years. The Piedmont territory is also the largest recipient of tire yarn, taking 36 per cent of total tire yarn shipments during 1946. In addition to the Piedmont area, tire yarn shipments are concentrated in the South, Pennsylvania and Ohio.

Bill Would Control Temperatures in Plants

A bill which would govern the minimum and maximum temperatures of "all textile manufacturing plants and all industries wherein wearing apparel is made from cloth or yarn in South Carolina" recently was introduced in the state House of Representatives at Columbia. The measure, which was referred to the Commerce and Manufacturers Committee for further study, provides that employees shall not be required to work in rooms where "relative humidity is higher than 80 degrees Fahrenheit" nor "where the temperature is raised by heating devices higher than 85 degrees, provided that when the outside temperature is above 95 degrees the work room temperature shall be at least ten degrees lower than such outside temperatures."

It further specifies that "each work room of such employee which has less than eight per cent of the floor space thereof served by open windows or doors, shall receive at

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least four changes of air per hour." Where mechanical means are used to ventilate a work room, a minimum rate of 25 cubic feet per person employed in such room per minute and not more than 200 cubic feet per person shall be allowed for work space, the bill requires. The Commission of Labor would have authority under the bill to issue exemptions justified by reason of the fact that to comply with such conditions would work an "undue hardship" on the employer.

Piedmont A. A. T. C. C. Plans Future Gatherings

The Piedmont Section of the American Association of Textile Chemists and Colorists will hold its spring meeting April 12 at Greensboro, N. C. Letters giving full details of the program will be mailed to members as soon as the program is completed, it was announced. The meeting will be held at the O'Henry Hotel and members have been requested to make their reservations at once at the O'Henry or King Cotton Hotels.

It was announced also that the summer outing of the group would be held June 20-21 at the Ocean Forest Hotel, Myrtle Beach, S. C. Fred E. Sprock of the Geigy Co., Charlotte, N. C., heads the committee on arrangements for the outing and letters giving full details of the program will be mailed when arrangements have been completed.

Upward Adjustment in Wool Prices Announced

A slight upward adjustment in the selling price of wool owned by the Commodity Credit Corp., made necessary by the increase in the parity index as of Jan. 15, was announced Jan. 30 by the Department of Agriculture. While price adjustments in the schedule of selling prices will vary by grade and classification of wool, the increase on the average is one cent a pound, clean basis.

The British and American governments now possess a huge surplus of wool and are concerned about its disposition, without damaging the American grower. The Commodity Credit Corp. now holds 460,000,000 pounds and the British Control Council has a stockpile of 4,000,000,000 pounds. The British-held wool is not earmarked for British consumption but can be sold anywhere at any price.

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Worsted Yarn Spinning on the American System

(Continued from Page 23) the best results, tops shorter and finer run very well. Tops must contain two to three per cent oil. Humidity should be between 55 to 60 per cent relative at 75 to 80° room temperature.

Yarns spun on this system resemble and compare most favorably with yarns spun on the French system; 36s to 40s worsted is about the top limit. We have spun up to 50s, but in our opinion the quality was not up to good commercial standards.

By the end of this year, there will be nearly a hundred thousand spindles of this equipment running in 19 different mills. The potential capacity of these mills on 30s worsted yarn would be at the rate of 18 million pounds per year on a two-shift or 80-hour basis. In addition to these spindles which have been bought to process 100 per cent worsted fibers, there will be 70,000 spindles of spinning and complementary roving which could be changed from processing long staple rayon to processing worsted; the only requirement would be to purchase top weighing 50 grains per yard, and one of the big top makers is already producing top of this weight.

So much for the machinery, what you and the trade in general want to know is, what are the advantages? How much are these offset by the disadvantages? We have been very conservative in our claims for this new system for many reasons. We, who have had charge of the development and running of these machines, and making the tests, are not by training familiar with worsted spinning. Our training and experience previously had been entirely in the processing of cotton and rayon fibers and blends of all kinds, including wool. While we were competent to judge evenness, running qualities and general appearance, we were not acquainted with worsted requirements.

During this period, as you well know, any kind of yarn or fabric has been snapped up by the market regardless of value. Because of this situation, we felt it would be dangerous to decide that we could go all out in recommending this new system. Our policy has been that the only guarantee we will make is that any yarn we make in our experimental room can be duplicated with our equipment in a mill under the same conditions. The most important reason for our being conservative is we have no control over the top makers and without proper tops, this system will not produce satisfactory yarns. Perhaps the regular system won't, we don't know, but we are responsible for this one. To make yarn on our system that will compare with regular spun worsted yarns, it is necessary for the finished drawing sliver variation to be within 20 to 25 per cent. I am speaking of inch-to-inch thickness variation. The variation of the average top is so great that with our cotton sliver tester, we can't keep the graph on the paper at times, and 12 to 15 per cent variation above and below standard weight per yard is not unusual. However, some of the top makers who are interested in this new system have taken steps to improve this situation. One prominent top maker has furnished us with a top that only varied 25 per cent on the first drawing.

These reasons I have mentioned for our conservativeness are not necessarily disadvantages, but as machine builders we have a responsibility for the success of all the machines we make, and if this equipment is not handled properly the system will not be a success.

Among the advantages is that the equipment would not require as large a financial outlay as for the regular equipment. From the standpoint of labor cost, there would be a considerable reduction. For example, comparing two layouts of 4,000 spindles, one on regular system and one on American, there was a difference of ten operatives in favor of the American system. With an average wage of $1 an hour, this would mean a saving of $10 per spindle per year on a two-shift basis.

The roving frame and spinning frame with the double apron drafting system are superior to the machines used for same purpose on regular systems from standpoint of fiber control. The disadvantages are the small number of doublings making well combed and even tops an absolute necessity. There is a lack of flexibility, as only tops of certain lengths can be run. There probably are many more advantages but those given are the most important.

In conclusion, I would like to say that in my opinion there is no question but that satisfactory yarns can be made on this system at a lower cost than on the regular. Among the mills which have this equipment, some are and have been making worsted yarn and fabrics for years on the regular systems. These mills in some cases have had this new system running side by side with regular and have made daily comparisons for the past two years. The great danger is that some of the mills using this equipment may not have the proper knowledge and respect for the worsted fibers and what might happen could be serious. The ideal layout is one where the job standards could be evaluated factually and where the management would have both the appreciation of cotton mill practice and worsted mill respect for what is without question, the greatest of fibers.

Cotton Council Goes Into High Gear

(Continued from Page 24) qualities and performance of cotton and synthetic tire cord. It was similarly agreed to give immediate attention to opportunities for the introduction and sale of flameproofed cotton products.

Council public relations activities will be expanded during 1947, it was decided by delegates, through the assignment of a member of the staff to the Washington office to better service the industry and program divisions located in the capital city. It was voted that during 1947 special emphasis would be placed on projects designed "to impress on all members of each branch of the industry the vital importance of the council and its work."

Alarmed by what they termed "the utter disregard of the public welfare" by certain leaders of organized labor, the council delegates unanimously adopted a program calling for new labor legislation. The delegates expressed the belief that the current labor situation has been brought about by such Federal statutes as the National Labor Relations Act and "other legislation reputed to have been passed in the interest of American labor."

The program asked by the council would: prohibit the closed shop, the check-off and maintenance of membership system; guarantee the right to work and to join or not to join any union; prohibit strikes against the government, utilities and services necessary to the health, safety and general welfare; and prohibit jurisdictional and secondary strikes and boycotts. The council also urged that anti-trust laws be made applicable to all monopolies "whether created by corporations, associations, unions or individuals," that picketing be limited as to numbers and restricted to

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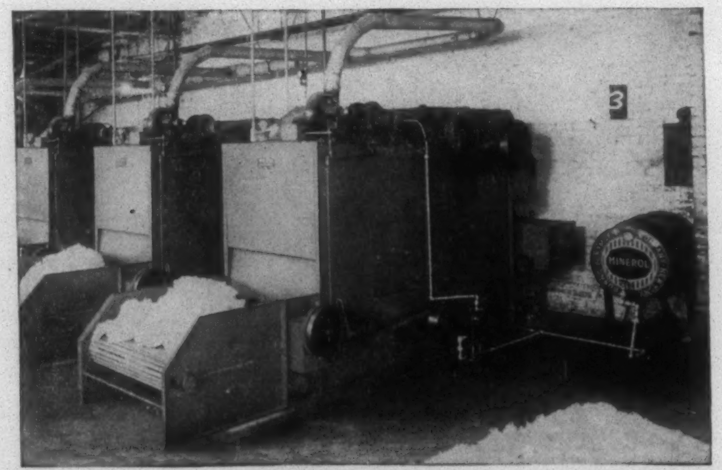

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employees of the affected establishments and that the unions be made subject to the same laws as corporations which sell their securities to the public. It was also urged that all decisions of the National Labor Relations Board be made subject to review by the courts and that the powers of the N. L. R. B. be revised so that "it may no longer act as prosecutor, judge and jury." The council took a position on portal-to-portal wage suits in a resolution which called for enactment of Federal or state laws which would fix one year as the time within which all actions seeking recovery of wages may be instituted.

Attacking the administration of the Fair Labor Standards Act on the basis that interpretations of "the area of production" issued by the administrator of the act have been "unrealistic and improper," the council demand that the act be amended in such a way as "to transfer from the administrator of the act to the Secretary of Agriculture the duty and authority to define 'area of production' with respect to the various agricultural and horticultural commodities."

Vigorous opposition was voiced by the council to legislation such as is now pending in Congress which would prohibit the manufacture and sale in interstate commerce of textiles and fabrics which fail to meet governmentally-imposed standards of flammability. Delegates explained that such legislation, if enacted, would involve highly abstract standards, having the effect of draining from the market certain established fabrics which "have enjoyed consumer favor for many generations. The effect of such legislation would be to diminish cotton consumption and seriously reduce employment in the cotton industry."

Militant leadership by the cotton industry in a movement to "end the monopolistic influence of a few arrogant leaders of organized labor," was urged by President Johnston in his address prepared for delivery before the convention delegates. The council leader informed those in attendance that the present control of the nation's economy by the "labor monopoly" is far more extensive than any power which the industrial monopoly of former days ever possessed. "The uncontrolled, selfish, grasping and audacious union racketeers who have gained control of this nation's economy through legal means in the past 14 years provide a threat not only to the cotton industry's basic objective, but a threat to the very existence of the nation itself," Mr. Johnston declared.

Referring to a threat by Daniel J. Tobin, president of the International Teamsters Union, last year to boycott cotton products as a means of breaking the "cotton bloc" in Congress, Mr. Johnston said that Tobin's boycott demand caused little concern in the cotton industry. "We are worried, however, over the trend that this un-American sentiment represents," he said. "There is no better illustration of the extremes to which unbridled labor leaders will go than this audacious attack on our own industry.

"The real danger lies in the power of a secondary boycott, which is vested by law in labor unions and upheld by the Supreme Court of the United States—a power which places this nation at the dictates and mercy of the czars of labor. It is actually possible, under existing law, for a handful of men in key positions in labor unions to prevent the handling of cotton, cottonseed and their products in channels of commerce. This is a power which should not be vested in any group of people."

Differentiating between labor leaders and the working man, Mr. Johnston asserted that the cotton industry "has no quarrel with the American working man. Our quarrel is with those ruthless, avaricious and ambitious men who have, by one means or another, come to be dictators in the field of labor. These so-called leaders constitute a serious menace not merely to American industry and to free enterprise, but also to the American way of life."

Mr. Johnston called on the council delegates and the cotton industry to take the leadership in organizing all groups representing agriculture, business and the general public at a community level to inform the people at a community level of the "tragic situation." Once the Congress is fully aware of the desires of the people, he said that a quick solution to the labor issue can be expected. "The course I recommend is necessary to protect the welfare, not merely of the farmers and industrial workers of America, but is essential to the future welfare of the nation and the protection of all of the people of the United States."

Aside from the labor issue, Mr. Johnston told the cotton industry leaders that intensification of effort in cotton's program to meet the challenges of its competitors is imperative. "We must meet our competitors with the quality of our products," he said. "We must meet them in price; we must meet them in the volume of sales pressure we put behind our goods. The quality of our cotton can be improved by research—research that starts with the breeding of better cottonseed and extends to the improvement of shirts and sheets and all other products which cotton offers. We must speed up this program—we must give it every ounce of energy which a united industry commands."

Expressing gratification at the enactment of the Agricultural Research Act of 1946, Mr. Johnston warned that only when appropriations authorized under the act have become reality will cotton have begun to meet its competitors in volume of research effort. The industry leader paid tribute to Secretary of Agriculture Clinton P. Anderson for his efforts in behalf of the research act, declaring that the agriculture secretary's leadership "has given the program the impetus needed for its successful planning and execution." He also gave Mr. Anderson credit for having re-established the cotton textile industry in Germany and Japan, saying that through his efforts already more than a million bales of American cotton have been shipped to these countries.

Giving recognition to the change in political control in Congress, Mr. Johnston said that he is "most confident that all programs affecting cotton will receive the utmost consideration by the new majority party."

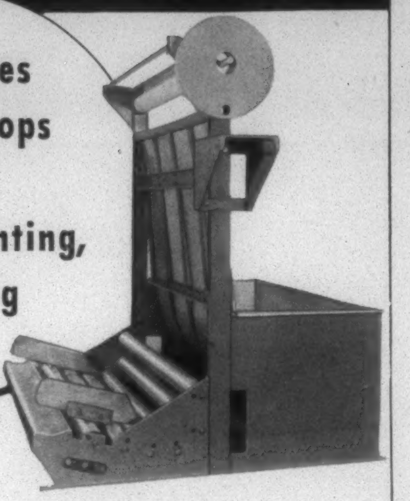
He pointed to mechanized production as one of cotton's greatest hopes for lowering costs. In one section of the Cotton Belt, Mr. Johnston said that use of machines had reduced the man-hours required for producing and harvesting an acre of cotton from 140 to 150, to between 15 and 30, depending upon the amount of hoe labor required for weed control. "There still remains much to be done before an adequate mechanization program can be effected, however," he declared. "The shift is on its way, and, although it undoubtedly is adding materially to production efficiency, it lends itself to additional problems which must be solved."

Worth Street Merchants Analyze Market

(Continued from Page 27) 43 business years, double those of 1945, and did not propose to repeat this. It might be avoided by not taking goods of types found "in markdown sales and in rummage sales and in church bazaars;

Mount Hope CONTINUOUS ROLL FEED

Eliminates Costly Stops in Dyeing, Printing, Finishing



SLACK in the scray box of the Mount Hope Continuous Roll Feed permits full speed operation of your dyeing, printing or finishing machines while supply rolls are being changed. And one person can quickly, easily sew on a new roll. Here is a valuable saving in time and labor, two precious commodities in any mill. A third saving effected is the virtual elimination of cloth damage due to machine stoppage when supply feed is interrupted.

The Mount Hope Continuous Roll Feed consists of a cradle, with ball bearing rolls, in which the new roll is held in place by adjustable selvage locators, motor driven ball bearing nip rolls and a scray. A center bar let-off with brake may be substituted for the cradle, if desired.

The use of the Roll Feed varies with the manner of using the scray as in the three methods listed below:

1. Scray normally empty (except when sewing on new roll) with cloth being pulled from roll over two ball bearing idler rolls. Just before new roll must be sewed on, operator starts simple constant speed motor putting nip rolls in contact thus filling scray.
2. Scray normally full to level controlled by electric eye. Simple constant speed motor starts and stops automatically to maintain this level.
3. Scray normally full. Level maintained by synchronizing nip roll speed with speed of machine being fed, by variable speed drive from direct current motor, or from mechanical speed changer and constant speed motor.

The Open Width Tension Device, illustrated below, should be used with the Mount Hope Continuous Roll Feed when the cloth is guided to a succeeding machine.

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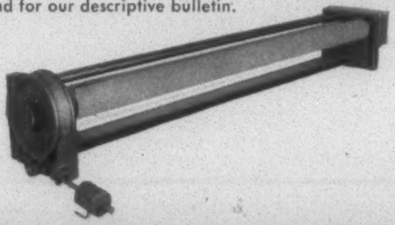

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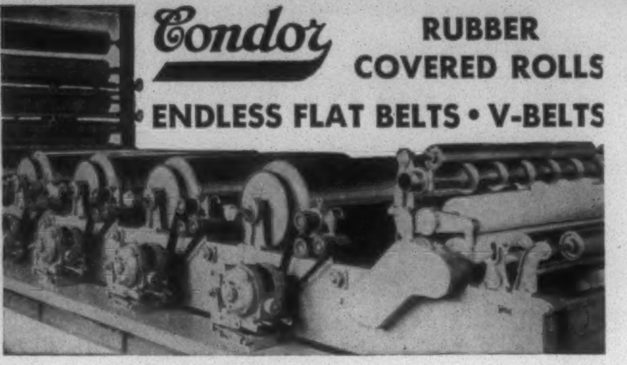

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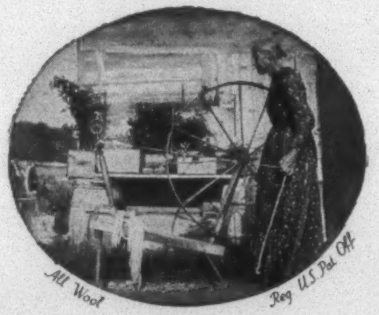

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mark-ups also must be avoided and prices kept just as low as possible. Consumers are conscious of living costs, and there are others bidding for the consumer dollar. There's competition between the new house dress and the percolator. There's competition between the boy's new suit and the bicycle. There's competition between the new Easter outfit and the handy household freezing unit." Mr. Hughes cited price comparisons between cottons and rayon and wool goods, noted that "I've whistled a bit at the prices on some of these new durable goods," and held that cotton must offer real value for the consumer dollar in order to meet competition.

Mr. Delaney in his address listed 13 active projects afoot in the research field through the Charlottesville organization covering such broad fields as dyes, cellulose chemistry, fiber analysis, resistance to soiling, finishing agents, flameproofing, shrinkproofing and waterproofing, and new and revolutionary approaches to processing. A number of projects have been completed and many others are afoot, even though the institute is of recent establishment, dating from a Worth Street meeting in 1944 when one million dollars was pledged initially for the project of duplicating in textiles what the Institute of Paper Chemistry was in the field of pulp and paper.

The speaker noted that the progress of research was vital to textile merchants who "are the front line troops" getting the customer's "first reaction to performance and price." Improved products, clearer thinking, broader knowledge of textile materials and their processing, he said, are vital to improvement of the position of this country in world markets and its ability to compete under conditions of high costs here, and in opening up at home "tremendous undeveloped markets in industrial uses which are awaiting us."

Mr. Hughes acted as chairman in presenting the public relations program of the industry. He noted that textiles have evolved from an original status as a cottage and home industry in unsanitary environments to a mill industry conducted in well lighted, ventilated, anr-conditioned and sanitary plants. He pointed out that although the industry today is thoroughly modern, it still lives under a public misconception based on conditions long gone. With the objective of overcoming adverse public opinion, surveys were made in 1945 and the industry's public relations committee organized, with Mr. Dudley handling the program.

Mr. Dudley presented in detail the program being carried out under his care. He noted a gratifying rise already in the amount of favorable publicity the industry is receiving. Particularly valuable, he noted, were public relations clinics being held in mill regions North and South, so that the local relations of plants with their home communities will be improved. Mr. Pendray followed Mr. Dudley with an exposition of the general values and objectives of public relations and their usefulness to industry.

The dinner committee included John C. Hughes, Herman D. Ruhm and Richard Pohlers.

Industrial Trucks in Textile Manufacturing

(Continued from Page 34) Unscheduled loss of service according to Mr. Ridley, averages about ten per cent, this being mostly for repairs to the older trucks. The absence of fumes and the quiet of the trucks are listed by Mr. Ridley as among the advantages of the battery-powered trucks, although he is inclined to feel that their heavy weight

was a disadvantage on certain of the operations. Trucks are withdrawn from service for greasing and inspection, check-up, etc., every two weeks, with batteries being checked by electricians once weekly. Three battery charging stations are located at strategic spots about the plant which covers some 24 acres, and the buildings of which contain some 43 acres of floor space. One of these stations, the newest, has an automatic charger. Batteries, which are not removed from the trucks, are charged about six hours, with a booster charge during the lunch period. "We need more batteries," Mr. Ridley says, "so that we will have spares for each truck. This would, of course, permit even greater use of the trucks. The power we use costs us about one cent per kilowatt hour, and we have found that the cost for a day's operation is not high."

Department heads have charge of the assignment of the trucks for various jobs, although some are repetitive and the operators know what task is to form their day's routine. Operators of the trucks are given some six weeks of training on the use of all types of the battery-powered trucks in use, and also are grounded in the observance of the rules governing operation within the plant's buildings, such as keeping within the definite aisles laid out on the floors; the sounding of horns; the "no riders" rules; the passing of other trucks, etc.

Between ten and 15 tons per man-hour is handled by means of the battery-powered trucks, according to Mr. Ridley. Among the items handled are new and used shooks, taken from freight cars and transferred into storage; wool, rayon, cotton and jute in bales; salt, chemicals, dyes, etc.; waste material. As stated, items of machinery also are handled and moved from point to point.

In the unloading of wool the average number of cars handled is four in an eight-hour shift, although under pressure six cars have been handled in the course of one shift. Each car contains about 50,000 pounds of wool in bales. These bales are removed manually and placed on the platform trucks, a 12-man gang, including checkers and the operator, doing the work. This wool is taken from the cars into test storage where the bales are held awaiting reports of the tests as to quality, etc., before they are tiered in storage. It is not until the test results are known that the bales are stacked three or four high, being removed as needed. Wool storage is about 8,620,000 pounds with some 4,500,000 pounds in one area, the balance in another.

Special attachments are provided for certain of the trucks, so that in the winter months they can be used as snow-plows to clear some 93,200 square feet of yard area, including roadways, and parking spaces and including 960 feet of railroad siding which must be kept open if cars are to be received and shipments made during the stormy winter season.

Increased handling speed with greater safety and a substantial increase in the load capacity of freight car shipments—these are results of a handling system recently installed by Magee Carpet Co. at Bloomsburg, Pa. Magee, a well known carpet and rug manufacturer, required a handling system able to move its raw materials from incoming cars to storage, to move finished products to outgoing cars, and to also take care of routine handling operations in the plant. Most important, perhaps, is the job of handling the finished products which are packed in boxes weighing up to 1,000 pounds and ranging up to 18 feet in length.

Loading these huge and heavy boxes into freight cars

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had formerly been a difficult problem, requiring considerable manpower because of the weight of the load. Magee traffic engineers, in co-operation with Towmotor Corp., handling experts, worked out a solution to this problem involving a unique use of the Towmotor lift truck and a specially devised crane arm, hook and grappling tongs. The truck picks up the boxes in the warehouse and transports directly to the freight car on forks. Inside the freight car, the tongs hold the box in the center, supporting it from above rather than from below in the usual lift truck fashion and the boxes are lowered into place, one on top of the other.

Plus value in the truck operation is its ability to add a fourth layer of boxes on the three already in position. For this operation, the tongs are placed at the end of the box to lift this one end up and over the third box. The tongs are then moved to the other end of the box and this end is brought level. A "nose" which is a detachable part of the crane arm is then brought into play and the box is pushed forward into final position, neatly, swiftly and safely. The safety factor is important here, for it's obvious that using manpower for such operations is likely to result in lifting strains and other injuries.

Over-all results show that use of the lift trucks now enables Magee Carpet Co. to load more boxes into one freight car and to complete the job in 3½ hours, using only two men. Former methods required ten men, working a total of 15 man hours. The crane attachment on the truck is easily detachable, making the lift truck available for other routine operations in the plant.

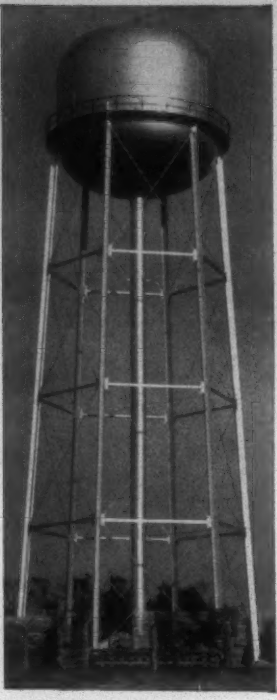
Woolen Industry Seen Moving South

The gradual migration of the woolen and worsted industry to the South, a trend observed even before World War II started, gained considerable momentum in 1946, statistics reveal, and the pace is expected to continue during 1947. Although a major portion of the South's fast growing textile segment is due principally to shifting of plants from the New England area, home-grown talent in Dixie has also made its contribution. Peerless Woolen Mills of Rossville, Ga., Arnco Mills of Newnan and Atlanta Woolen Mills of Atlanta, to mention a few in Georgia, are home-organized and home-owned. Mooresville (N. C.) Mills plan a $700,000 plant for production of rayons and woolens as part of its 1947 million-dollar expansion.

Even during the war days Georgia's cotton mills were experimenting with production of worsteds on cotton machinery. The Newnan Cotton Mills, a pioneer in this move, has been producing worsteds, merino yarns, mixed fiber yarns of wool, rayon and other synthetic fibers. Other large Georgia cotton mills that have gone into the production of worsteds include Bibb Mfg. Co., Callaway Mills and West Point Mfg. Co. In 1947 it is expected this production will attain a more significant volume. The extent of the threat that this trend poses to King Cotton remains to be seen.

One of the first woolen plants of the North to come to Georgia was the Uxbridge Worsted Co., which established the Cedartown Textiles at Cedartown and Macon Textiles at Macon. Uxbridge also has a woolen plant in Virginia. Pacific Mills has two worsted mills in the South and a third under construction. Stillwater Worsted Mills of Rhode Island has three mills in Virginia.

Taking the lead in 1946, however, was Deering, Milliken



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& Co. of New York, which began construction of two large worsted weaving mills in South Carolina. One plant at Johnston, S. C., will have approximately 100,000 square feet of modern construction. It will process wool and synthetic yarns. A second Deering, Milliken worsted mill is located in McCormick County, S. C. Blackinton Mills Corp. of North Adams, Mass., has taken over the old Conestee Cotton Mill plant at Conestee, S. C., and has established a woolen mill there.

Last fall the Civilian Production Administration announced approval of plans for a woolen manufacturing plant to cost $2,250,000 at Aberdeen, N. C., but identity of the owner of the huge plant was withheld. The plant was scheduled for completion in late spring, 1947. M. T. Stevens Co. of Andover, Mass., recently announced plans to erect a large woolen mill at Dublin, Ga.

Reflecting the increased interest in the woolen industry in the South, Texas Technological College at Lubbock has added a complete wool manufacturing laboratory, taking the lead in wool research and instruction of students in methods of wool manufacturing.

American Viscose Has Best Safety Year

American Viscose Corp. in 1946 had the safest year in its history. The frequency rate in its seven rayon producing plants was 3.9 lost-time injuries per million man-hours worked. This means that an average employee in an American Viscose Corp. plant could expect to work for 125 years without a lost-time injury.

The 1946 frequency rate represented nearly a 50 per cent reduction from the 1941 frequency rate of 7.2. According to National Safety Council figures, the American Viscose Corp. plants are considerably safer than the average home. The winner of the company's inter-plant safety contest for 1946 was the Nitro, W. Va., plant, which went through the year with a perfect record of no lost-time injuries. This plant, as of Dec. 31, 1946, had worked for 496 days or 3,516,237 man-hours without a lost-time injury.

Wesley Chase Heads Arkwright Club

Wesley Chase of Mount Hope Finishing Co. was elected president of the Arkwright Club at an organization meeting of the board of governors in New York City Feb. 4. Mr. Chase succeeds F. J. Digney of Catlin Farish Co., Inc. Will L. Logan of Logantex Co., formerly chairman of the house committee, was named vice-president. Re-elected were H. M. Zimmerman of McCampbell & Co., treasurer, and William Nagle, Jr., Utica Knitting Co., secretary.

The following committees were named by Mr. Chase: House—chairman, N. Ross MacCallum, American Bleached Goods Co.; vice-chairman, John D. Hawke, Uncas Finishing Corp.; C. Scott Lewis, Reeves Bros., Inc.; Ralph M. Allaire, Taylor, Pinkham & Co.; Mr. Nagle. Finance—chairman, James J. Gallagher, Marine Midland Trust Co.; vice-chairman, Mr. Zimmermann; William S. Westervelt, Deering, Milliken & Co.; H. S. Van Ingen, Dan River Mills; William DeMin, Pepperell Mfg. Co. Membership—chairman, Mr. Westervelt; vice-chairman, Mr. Gallagher; A. F. Earley, Pope & Earley; Mr. Digney; Mr. DeMin. Entertainment—chairman, Mr. Lewis; vice-chairman, Mr. Allaire; Mr. Hawke; Mr. Logan; Mr. MacCallum. Affiliations—chairman, Mr. Digney; vice-chairman, Mr. Van Ingen; C. H. Nintzel, J. L. Baily & Co.; Mr. Earley.

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Cotton Goods Market

Recent activity in New York City's Worth Street textile market has been limited mostly to regular movements of fine specialties at prices near and slightly above O. P. A. levels and limited sales of stable goods in the second hand market. With large numbers of buyers in town, surprising resistance was encountered by those offering second hand goods. Buyers declare that prices asked are entirely out of line and, while the demand for the goods is still extreme, some buyers are adamant in their position to stay out of the market at present levels.

Sellers however, profess to see no trend in the resistance. They declare that, as soon as the buyers find that there is a market for the goods, they will be in for cloth at present price levels. In many cases, they say, these buyers will be disappointed as others, not as cautious, will have already purchased the small amounts of combed gray cloth available.

Another factor, which many sellers see as keeping the prices high, is the expected influx of exporters into the fine cloth market. These exporters, many of them willing to buy at any price, will supply torrid competition for domestic buyers of combed gray goods, it is said.

The opinion is advanced by some sources in the gray goods mart that the present strong position of cotton mills is due in a good many cases to the demand from some foreign markets. A lot of export business has been booked during the past few weeks in Worth Street commission houses, it is pointed out in the trade, these orders to run through the second quarter. With export controls generally expected to be dropped after this quarterly period, it is reminded, a lot of gray cloth should start moving overseas.

Big question before the market is where will third quarter prices finally settle at and will demand for goods remain at its present level. Some bag houses and converters are gambling on lower quotations for goods beyond June with predictions heard that a scramble for spot and nearby fabrics will result if they should be wrong.

There is not a very heavy demand as yet for goods beyond June, Worth Street executives say. One house reports it is willing to sell beyond the first half if those desiring the goods "are a good risk." However, so far nothing has been booked beyond the second quarter by this house because all of those customers pressing for an extended position are classified by this selling source as "second-raters."

While refusals on gray cloth might seem to indicate a growing resistance, other sellers report that demand is as strong as ever and that they are meeting no resistance as to prices. In fact, many of them emphasize, they could sell many more yards of cloth at present prices if they could obtain them.

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Cotton Yarns Market

Sale yarn sellers, presently prepared to issue locations into or entirely through the second quarter, observe that while knitters are frequently ready and willing to contract through June, numerous weavers are turning down similar coverages and buying only April.

Fine combed yarn still top the list of buyer requirements, and where prices are not more than one or two cents over old ceiling quotations, knitters are said to be seeking full coverage. Some yarn users are known to be paying higher prices for wanted combed yarn, but veteran spinners are still in some cases selling at a few cents over the old O. P. A. price.

In carded yarns, several spinners are reported ready to switch from 8s and under to production of finer counts while others are hog-tied by the delay in receipt of new machinery ordered months and years ago.

Though unable to arrive at any estimate of the probable poundage of cotton yarn shunted into the export market since the revocation of price and export controls, Philadelphia distributors admit the total shipped overseas has, "in all probability," greatly exceeded their expectations. Yarn men note that each day's mail contains queries from new concerns trading as "exporters." They not only want considerable weights of yarn, they say, but have the money.

Much of the yarn for which some exporters are paying high premiums, is being shipped to Argentina, according to some market observers. One seller who has been trading abroad for a number of years suspects that Brazil may have imposed some control on yarn exports, thus directing attention of Argentine buyers to the United States.

Additional spinners have commenced second-quarter business in both carded and combed yarn, market sources state. Contracting now in progress by the producers concerned is said to show increases up to a half cent a pound on finer carded yarns. The new prices are still considered "right next door" to old ceiling prices, and buyers, for the most part, are found ready to cover, either partly or fully, into the second quarter at such prices.

Distributors whose listed prices on coarse carded yarns are still only slightly under the controlled October levels, frequently find they must step down several notches before selling to buyers who refuse to do business at the quoted price, observers say.

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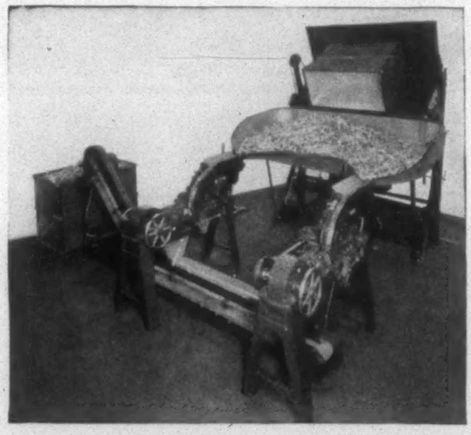

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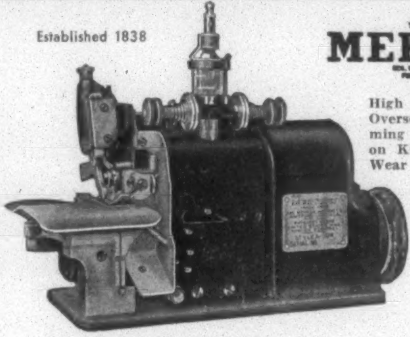

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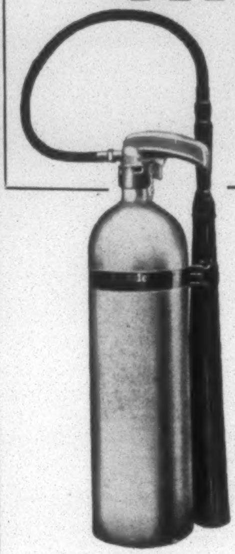

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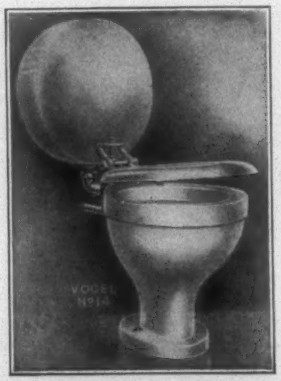

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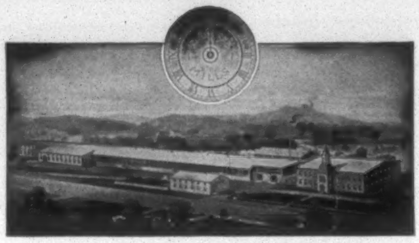

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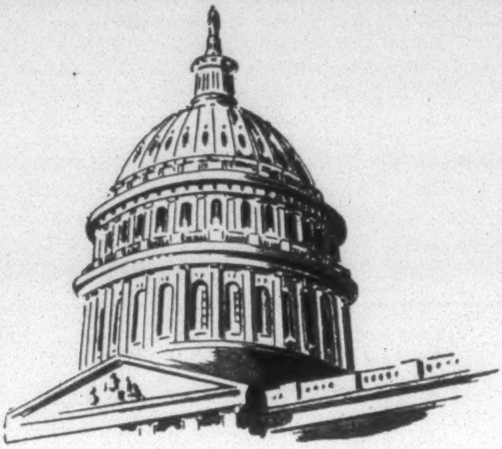

[Exclusive and Timely News from the Nation's Capital]

Agreement on general objectives in labor legislation has been reached by House and Senate leaders. The Senate Labor Committee will bring in a civil bill defining a new code of industrial relations not widely different from the old Case legislation and including many features of the Ball suggestions. This bill will be sharp, clear-cut and comprehensive. The House Labor Committee will bring in a drastic criminal anti-racketeering bill, aimed to outlaw every form of graft, extortion, blackmail, subsidy and compulsory contribution in industrial relations. This bill will vastly extend the scope of the Hobbs and Petrillo laws, outlawing stand-by pay, shakedowns, penalties on non-union workers, artificial barriers to free distribution or to restrain competition, insurance and benefit levies on workers as a condition of employment, and extorting health and welfare and pension and retirement donations from employers in the name of collective bargaining.

Chances favor early action on anti-racketeering bill in the House, with passage by a heavy majority. The House may wait on Senate action on a civil bill defining industrial relations. The reason is the Senate may take much longer to debate the matter, and House leaders prefer to work on a Senate-passed bill.

There's much random discussion of labor problems in both houses in advance of bills being reported, with an effort by opponents of labor legislation to spread belief that the ardor of Congress to regulate the unions is cooling off. Action will be fast when bills are brought in, with hot fighting and strong New Deal opposition. Bills will probably emerge from passage in about the form written in the committees, and adopted by an overwhelming majority in the House and a substantial majority in the Senate.

Union leaders are talking noisily of labor peace, which would seem to be propaganda intended to induce Congress to ease up in its determination to improve existing labor laws. The Administration seems to be abetting the propaganda. It's having very little effect in Congress, where the determination is strong to end union outlawry and monopoly.

Factory workers, as a whole, averaged $46.83 in weekly earnings in December, which is just 70 cents below the peak wartime earnings in January, 1945, says the Bureau of Labor Statistics. The average hourly rate was $1.14. However, the work-week shrank by 4½ hours, to 40.9 hours, and per-hour worker output was below the average of January, 1945.

The C. I. O. is determined to avoid big strikes until labor legislation is out of the way. Fear is that another big strike wave will force through the Ball bills, as floor amendments, in both houses by majorities too overwhelming for a veto. One year ago 575,000 electrical, motor and meat packing workers were idle by strikes.

Strike deadline of March 31 in coal is the growing cloud on the horizon. John L. Lewis may order out 400,000 miners. Southern operators are refusing to grant the terms Lewis won from the President last May, or make the concessions he demands now. The government is unable to turn back the mines it has held for 9½ months.

The A. F. of L. and C. I. O. are squaring away for an intense battle for domination in the labor field. C. I. O. calls the A. F. of L. position on strikes and portal pay "diabolical," and A. F. of L. says C. I. O. is camouflage for the "real Communist set-up."

John L. Lewis will emerge as the strong and dominant figure in labor if he wins his appeal before the Supreme Court from the fine of $3,510,000. He's almost certain to head up the A. F. of L. and may succeed in merging with C. I. O.

Evidence multiplies that the top-level Communist hierarchy is in firm control of many C. I. O. unions and guilds, and non-Communist officials are mere figureheads or fronts. Strike that destroyed the *Philadelphia Record* and Camden news-papers is described as Communist inspired and conducted, and aimed at setting up a new Communist organ.

Labor groups, while professing to lock the doors against Communists, agree nevertheless the main thing is to battle "the forces of reaction." No C. I. O. union has risen in bitter and rebellious housecleaning wrath against either Communists or fellow travelers in its ranks.

Interesting testimony comes out in the House Labor Committee's probe of the Communist-infested American Newspaper Guild. There's good reason to believe the Communist hierarchy, following Marshall Field's Communist purge in New York's *PM,* aimed to seize the *Philadelphia Record* and have designs on the *New York Evening Post* and the *St. Louis Star-Times* or the *Kansas City Star.*

Coal operators are asking Congress for a law to strip John L. Lewis of power to force a nation-wide coal shutdown. They assert he holds a monopoly in bargaining that strips them of resistance to extortion in addition to wage increases. They want industry-wide bargaining banned by law.

The Supreme Court may use Judge Picard's portal pay decision to lay down a yardstick for trial judges in dealing with the nightmare of back pay suits. It's felt the court acted hastily in its initial decisions without knowing what it was doing. Its wobbling in several cases flies into conflict with all administrative rulings on wage-hour law and existing wage contracts by creating new arbitrary definitions.

The House is seizing on the portal pay issue for early action. The bill of Representative Gwynne (R., Ia.) to outlaw such suits failed of House passage in the last minute logjam of the last session by refusal of Speaker Rayburn to call it up. Gwynne's new bill goes far beyond the old bill and deals extensively with labor policy.

Portal pay legislation will be carefully drawn so that manifold economic dislocations will not follow if held unconstitutional. A substantial House group favors repeal of all or much of the wage-hour law, which would require automatic dismissal of existing suits. A compromise seems likely. A provision may be inserted that if the law is held invalid, such decision terminates and repeals sections of the wage-hour law authorizing suits for retroactive pay.

Amid a Republican family squabble whether more tax relief should be given to the poor than to the rich, Chairman Knutson of the Ways and Means Committee sticks firmly to his demand for a flat 20 per cent income tax cut. Senator Taft, chairman of the Senate Republican Steering Committee, says he's for a 20 per cent over-all tax slash, not necessarily across the board.

Any tax cut must be based on a preceding budget reduction of $3.5 billion, or more. Senator George (D., Ga.) believes Federal employees should be reduced by 500,000, and the President's budget cut by four billion dollars. Government now has 2,300,000 employees, and George says there's no reason why it can't get along with same number as in 1941, which was 500,000 less.

Speaker Martin's formula is to balance the budget, start paying on the national debt and reduce taxes. House leaders fear a last minute stampede in this session to cut taxes 20 per cent and are manfully working to first slash and balance the budget and start debt payments.

The President is listening to his Congressional advisers for the first time, with the Hannegan-Allen-New Deal-C. I. O. contingent in the background. He's being urged to toss all hot economic and political issues, including any fresh rumpus with John L. Lewis, to Congress in the hope the Republicans will be split into two warring groups, giving the Democrats a chance to align with one or the other factions, and defeat the Republican legislative program.

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